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POTENT FOR SOUTHERN RECOVERY AND GROWTH.

In a letter to the Manufacturers' Record, Hon. Abram S. Hewitt, of Cooper, Hewitt & Co., of New York, who has himself been identified for many years with Southern development, says:

I fully appreciate the good work which your paper has done in the South. It has been the most potent influence, so far as I can judge, in the great recovery which has taken place. I have no doubt that it will continue to be an important factor in the growth which is coming. You have my best wishes in the efforts which you propose to make to continue the good work which you have done.

THE FULL TABLE OF CONTENTS WILL BE FOUND ON PAGE 452.

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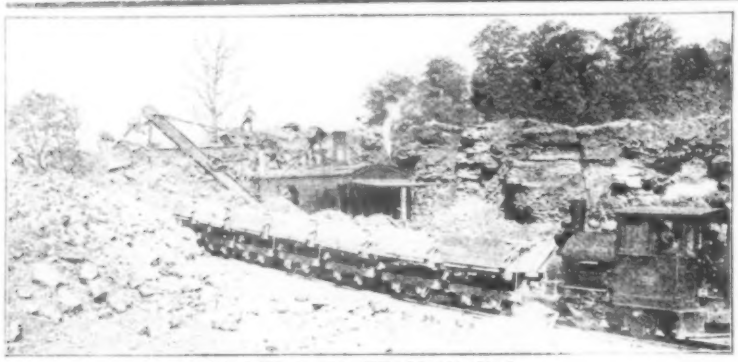

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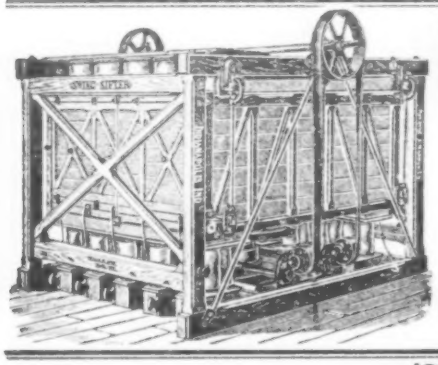

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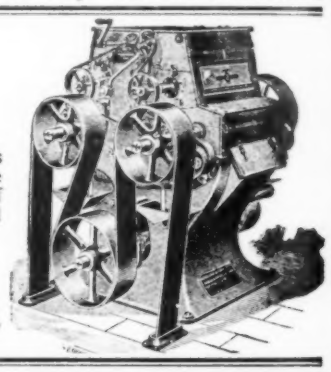

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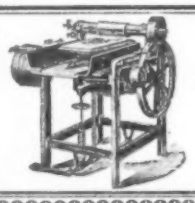

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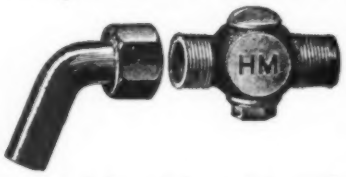

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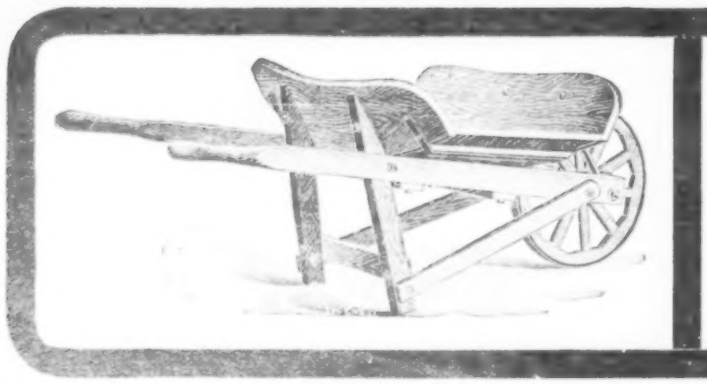

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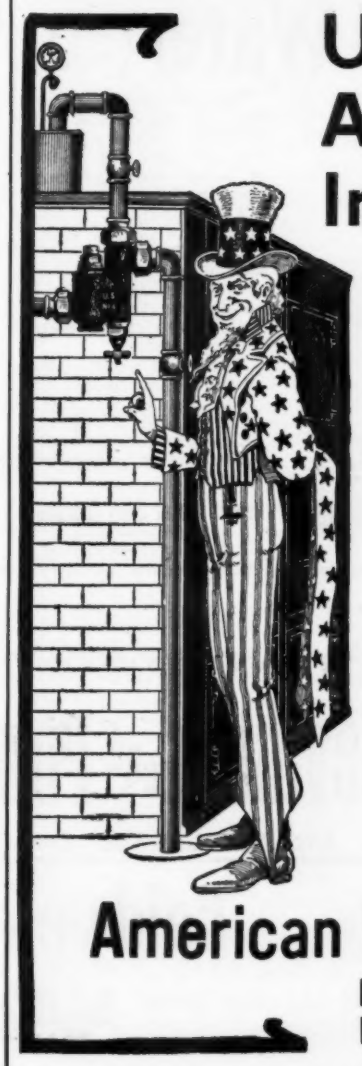

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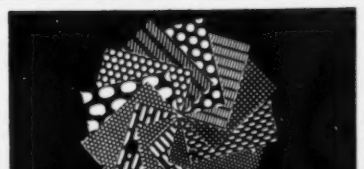

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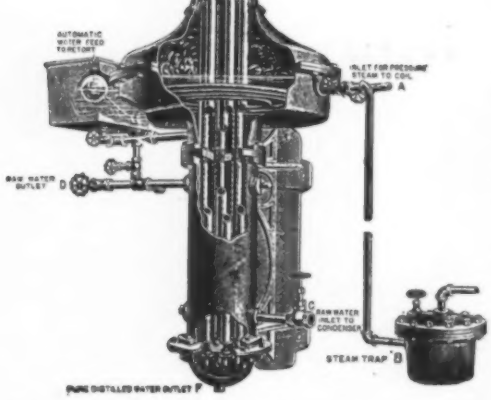
Pure Distilled Water (Not a Filter)



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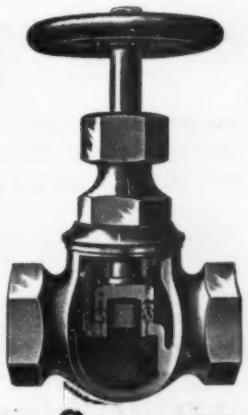

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General Electric Co., Schenectady, N. Y.
Guarantee Electric Co., Chicago, Ill.
Kentucky Electrical Co., Owensboro, Ky.
New Jersey Foundry & Machine Co., Plainfield, N. J
Northern Electrical Mfg. Co., Madison, Wis.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Smethurst & Allen, Philadelphia, Pa.
Smith, Samuel J., & Co., Charlotte, N. C.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Tower Binford Elec. & Mfg. Co., Richmond, Va
Triumph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

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Stanley Elec. Mfg. Co., Pittsfield, Mass.
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Upton, W. P., Co., Washington, D. C.

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Stanley Electric Mfg. Co., Pittsfield, Mass.
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Triumph Electric Co., Cincinnati, O.
Upton, W. P., Co., Washington, D. C.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.

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Triumph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.
Western Electrical Supply Co., St. Louis, Mo.

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Electric Supply Co., Savannah, Ga.
General Electric Co., Schenectady, N. Y.
Guarantee Electric Co., Chicago, Ill.
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Smith, Samuel J., & Co., Charlotte, N. C.
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Rockwell Engineering Co., New York, N. Y.

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Jacobson Mch. Mfg. Co., Warren, Pa.

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Crosby Steam Gauge & Valve Co., Boston, Mass.

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American Sheet Steel Co., New York, N. Y.

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Jacobson Machine Manufacturing Co., Warren, Pa.

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Erikson, Edward L., Pittsburg, Pa.
Wood, R. D. & Co., Philadelphia, Pa.

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Saunders' Sons, D., Yonkers, N. Y.

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Boston Belting Co., Boston, Mass.
Voorhees Mfg. Co., Jersey City, N. J.

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Whiton Machine Co., D. E., New London, Conn

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New Process Rawhide Co., Syracuse, N. Y.

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Chester Steel Castings Co., Philadelphia, Pa.
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Morse, Williams & Co., Philadelphia, Pa.
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Columbia Phonograph Co., Balto., Md.

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McClave, Brooks & Co., Scranton, Pa.

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Burnham Grate Co., Huntsville, Ala.

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Aultman Co., The, Canton, O.
Caldwell, H. W., & Son Co., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Engineering Co., Nicetown, (Phila.) Pa.

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Cook's Sons, Adam, New York, N. Y.
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Norton Emery Wheel Co., Worcester, Mass.
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Huther Bros., Rochester, N. Y.

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American Engineering Works, Chicago, Ill.
Dupont Mfg. Co., St. Jonnsbury, Vt.
Robinson, J. M. & Co., Cincinnati, O.
Standard Pneumatic Tool Co., Chicago, Ill.

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Egan Co., The, Cincinnati, O.
Fay, J. A., & Co., Cincinnati, O.
Root, B. M., York Pa.
Trevor Mfg. Co., Lockport, N. Y.

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Wrightsville Hardware Co., Wrightsville, Pa.

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Males Co., The, Cincinnati, O.
Robinson Machine Co., Monongahela, Pa.
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Eureka Fire Hose Co., New York, N. Y.
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Voorhees Mfg. Co., Jersey City, N. J.

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Cliff & Guibert Co., New York, N. Y.

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New St. Charles Hotel, New Orleans, La.

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Hydraulic Machinery.
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Wood, R. D., & Co., Philadelphia, Pa.

Hydraulic Rams.
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Cochran Co., Lorain, O.
Frick Co., Waynesboro, Pa.
Healy Ice Machine Co., Chicago, Ill.
Remington Machine Co., Wilmington, Del.
Singer Automatic Ice Mch. Co., Bridgeport, Conn.
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York Mfg. Co., York, Pa.

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Magid, Louis B., & Co., New York, N. Y.
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Polk, Wm., & Co., Alexandria, La.
Southern Industrial Co., Birmingham, Ala.

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Crosby Steam Gauge & Valve Co., Boston, Mass.

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Industrial & Development Asso., Alexander City, La.
Richmond Ind. & Development Asso., Richmond, Va.
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Wheeling Board of Trade, Wheeling, W. Va.

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Stuebner Iron Works, G. L., Long Island City, N. Y.

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Jenkins Bros., New York, N. Y.
Lunkenheimer Co., Cincinnati, O.
Ohio Injector Co., Wadsworth, Ohio.
Penberthy Injector Co., Detroit, Mich.
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Hartford Steam Boiler Inspection & Insurance Co., Hartford, Conn.
Maryland Casualty Co., Baltimore, Md.

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Electrical Material Co., Baltimore, Md.

Insulator Pins—Telephone Poles.
Electrical Material Co., Baltimore, Md.
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Electrical Material Co., Baltimore, Md.
Hazard Manufacturing Co., Wilkes Barre, Pa.

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Cox, Jr., Justice, & Co., Inc., Philadelphia, Pa.
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Watson-Stillman Co., New York, N. Y.

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Mayo Knitting Machine & Needle Co., Franklin, N. H.
McMichael & Wildman Mfg. Co., Norristown, Pa.
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Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.

Lamp Renewer. (Incandescent)
Incandescent Elec. Lgt. Manipulator Co., Boston, Mass.

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Brobston, Fendig & Co., Brunswick, Ga.
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Hornaday, J. P., Cincinnati, O.
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Sutherland, Howard Land Agent, Elkins, W. Va.
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Dietz Co., R. E., New York.

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American Tool Works Co., Cincinnati, O.
McCabe, J. J., New York, N. Y.
Schumacher & Boye, Cincinnati, O.

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Sinclair Co., S. H., Chicago, Ill.
Wilson Laundry Machinery Co., Columbia, Pa

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Robertson, Mfg. Co., James, Baltimore, Md.
Charleston Lead Works, Charleston, S. C.

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Carolina Portland Cement Co., Charleston, S. C.
Southeastern Lime & Cement Co., Charleston, S. C
Warner Co., Charles, New York, N. Y.

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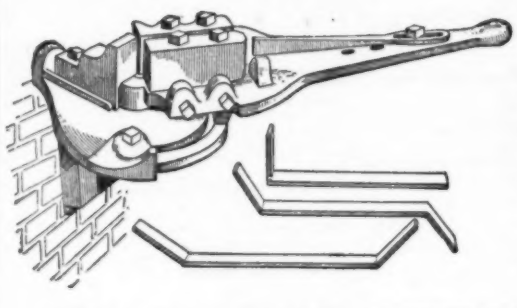

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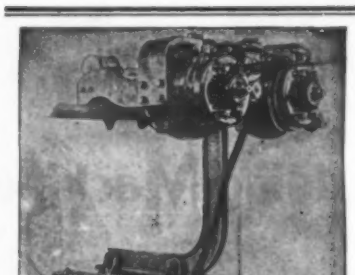

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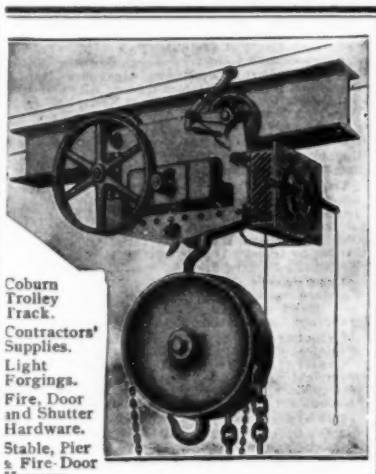

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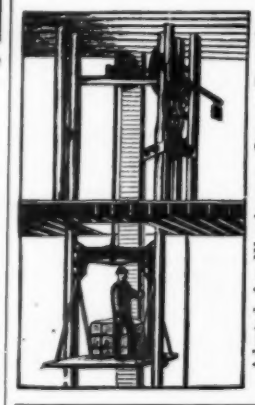

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Spartanburg Loom Harness Co., Spartanburg, S. C.

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Fairmount Machine Co., Philadelphia, Pa.
Kilburn, Lincoln & Co., Fall River, Mass.
Lowell Machine Shop, Boston, Mass.
Mason Machine Works, Taunton, Mass.

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Besly, Chas. H., & Co., Chicago, Ill.
Cook's Sons, Adam, New York, N. Y.
Crosby Steam Gauge & Valve Co., Boston Mass.
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Penberthy Injector Co., Detroit, Mich.

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Royersford Foundry & Machine Co., Royersford, Pa.

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Atwell Machinery Co., Pittsburg, Pa.
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Baker, R. C., & Co., Philadelphia, Pa.
Baumgarten, A. F., & Bro., Pittsburg, Pa.
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Caine & Plitt, Philadelphia, Pa.
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Casey, D. L., Mch. Co., Springfield, O.
Chicago House Wrecking Co., Chicago, Ill.
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Cox, Justice Jr., & Co., Ltd., Philadelphia, Pa.
Davis, W. P., Atlanta, Ga.
Henning, John, & Son, Philadelphia, Pa.
Harris, C. C., St. Louis, Mo.
Jones, J. B., & Co., Allegheny, Pa.
Lenman, Charles T., Birmingham, Ala.
Mallory, J. D., Baltimore, Md.
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Minnigerode, Wm., Lynchburg, Va.
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Prentiss Tool & Supply Co., New York, N. Y.
Price Machinery Co., Chicago, Ill.
Rechtin, Louis E., & Bro., Cincinnati, O.
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Sabel Bros., Jacksonville, Fla.
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Toomey, Frank, Philadelphia, Pa.
Torbert & Peckham, Chicago, Ill.
Trampe, Charles F., St. Louis, Mo.
Waters, John A., & Co., Richmond, Va.
Wickes Bros., Pittsburg, Pa.
Williams, R. O., Chicago, Ill.
Wisconsin Mchy. Co., Milwaukee, Wis.

Machinists' Supplies.
Besly, Chas. H. & Co., Chicago, Ill.

Mail Chutes.
Cutler Mfg. Co., Rochester, N. Y.

Manganese.
Kendall & Flick, Washington, D. C.

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Royersford Foundry & Machine Co., Royersford, Pa.
Whiton Machine Co., D. E., New London, Conn.
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Pittsburg Meter Co., E. Pittsburg, Pa.

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Bowsher Co., N. P., South Bend, Ind.

Mill Engineers and Architects.
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Ferry, Nathaniel V., Atlanta, Ga.
Praray, C. A. M., & Co., Providence, R. I.
Whaley, W. B. Smith, & Co., Columbia, S. C.
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Higgins, John C., & Son, Chicago, Ill.

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Milling Machines.
American Tool Works Co., Cincinnati, O.

Mineral Wool.
U. S. Mineral Wool Co., New York, N. Y.

Mine Locomotives. (See Locomotive B'ldrs.)

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American Engineering Works, Chicago, Ill.
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Simpson Mfg. Co., Chicago, Ill.
Stanley Electric Manufacturing Co., Pittsfield, Mass.

Mining Screens. [See Screens.]

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Dunning, W. D., Syracuse, N. Y.
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Columbia Refining Co., New York, N. Y.
De Ronde, Co., Frank S., New York.
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Muralo Co., New Brighton, Borough of Richmond, N.Y.
Muzzy Bros., Paterson N. J.

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Barrett Mfg. Co., Philadelphia, Pa.
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Colonial Paint & Varnish Co., Cleveland, O.
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Pinetown Paint & Chemical Co., Pinetown, N. C.
Standard Paint Co., New York, N. Y.

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Garrett, C. S., & Son, Philadelphia, Pa.
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McLanahan-Stone Machine Co., Hollidaysburg, Pa.
Raymond Bros. Impact Pulverizer Co, Chicago, Ill.
Simpson Mfg. Co., Chicago, Ill.
Smidth & Co., F. L., New York, N. Y.
Valk & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
West Pulverizing Machine Co., New York, N. Y.

Phosphate Screens. [See Screens.]

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Ryan, J. J., & Co., Chicago, Ill.
Phosphor Bronze Smelting Co., Ltd., Philadelphia, Pa.

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Alabama Con. Coal & Iron Co., Birmingham, Ala.

Piling.
New Orleans Wood Preserving Wks., New Orleans, La.

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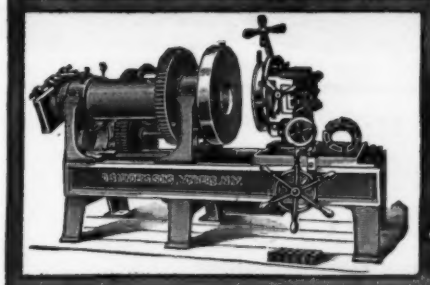

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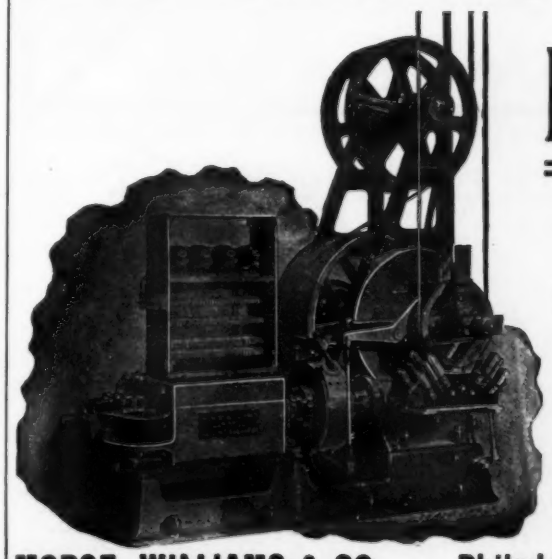

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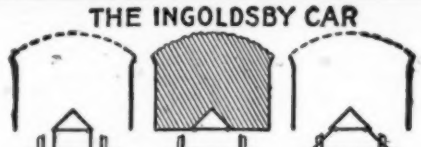

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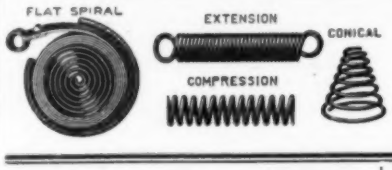

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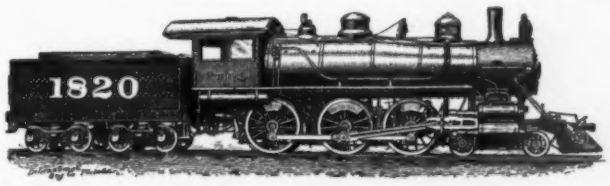

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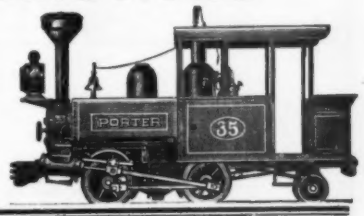

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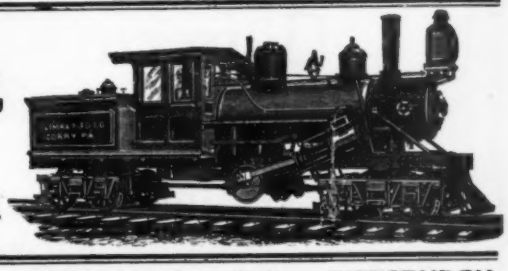

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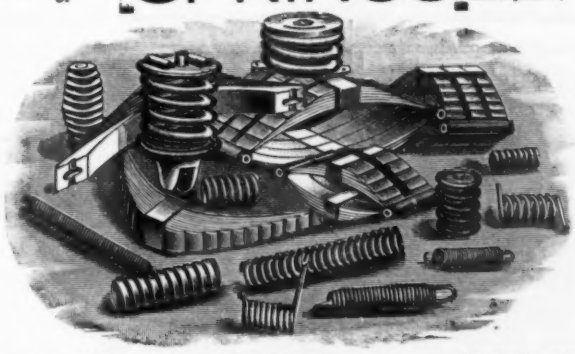

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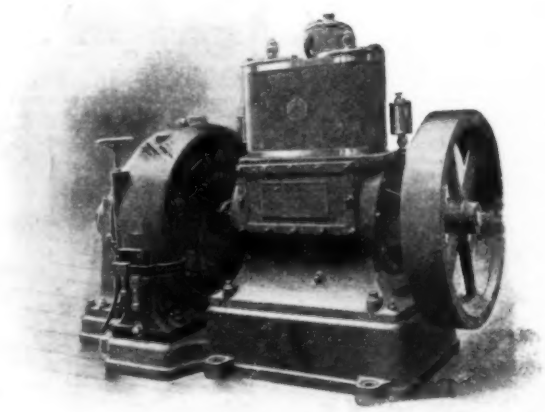

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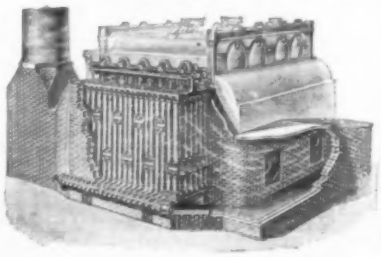

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Williams, J. R., & Co., Arvonia, Va.

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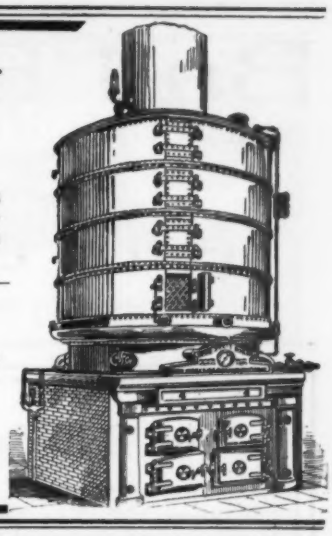

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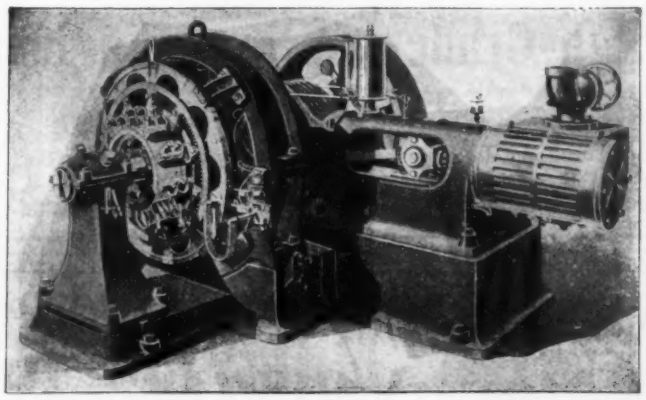

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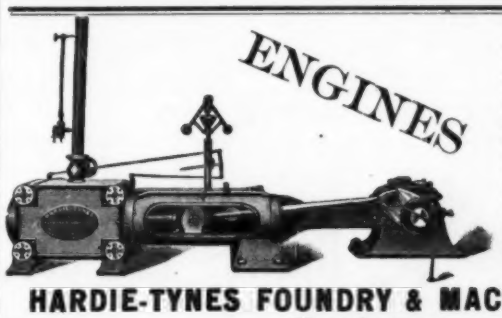

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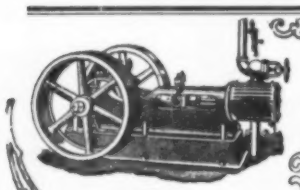

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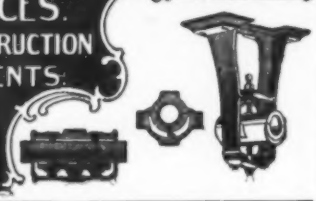

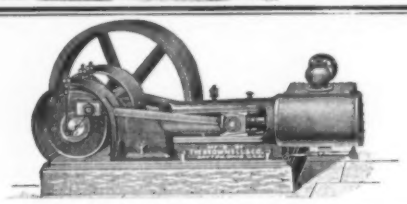

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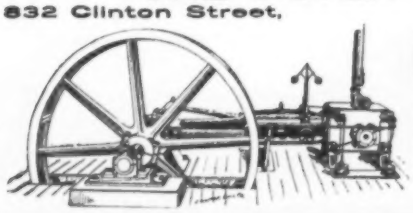

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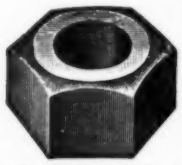

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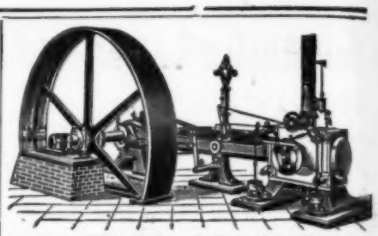

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BURLINGTON, IOWA.
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THE ENGINE for Cotton Mills and Large Factories.

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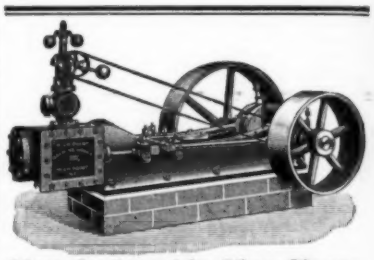

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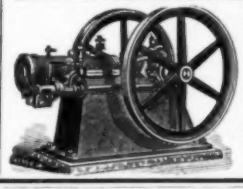

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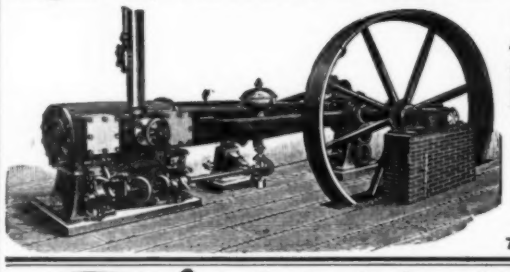

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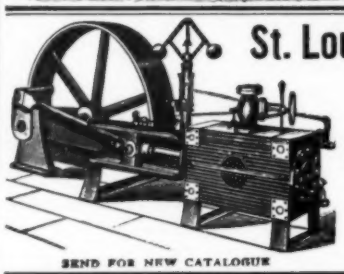

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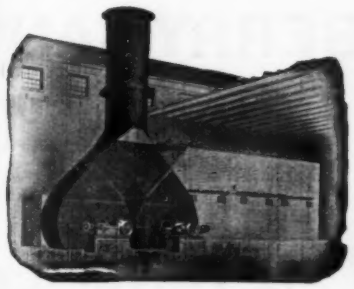

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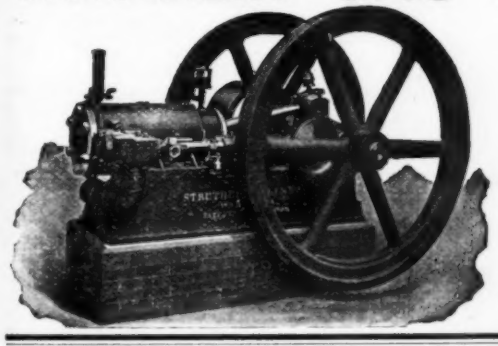

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Simple, Compound and Triple Expansion.
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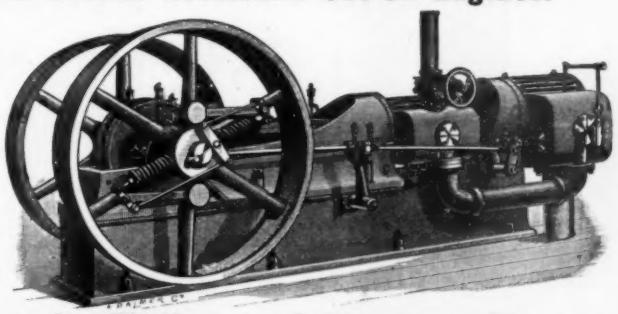

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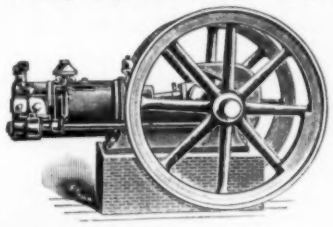
To those not our patrons, whose unreliable motive power has been a great drawback to prosperity we recommend the Otto.
We have successfully solved the power problem for many. Perhaps we can for you.



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report carelessness in no uncertain tone. The whistle blows, keeps blowing and blows so everybody can hear it. There's no keeping one quiet when the danger point is touched by high or low water in the boiler.
The result is increased watchfulness and care on the part of attendants, reducing boiler disaster chances to a minimum and insuring economy in fuel and boiler repairs by having the water carried steadily at the proper level.
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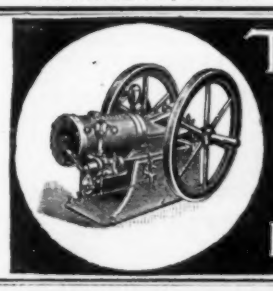

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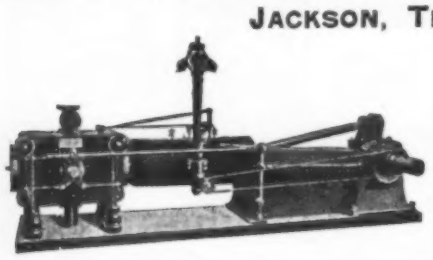

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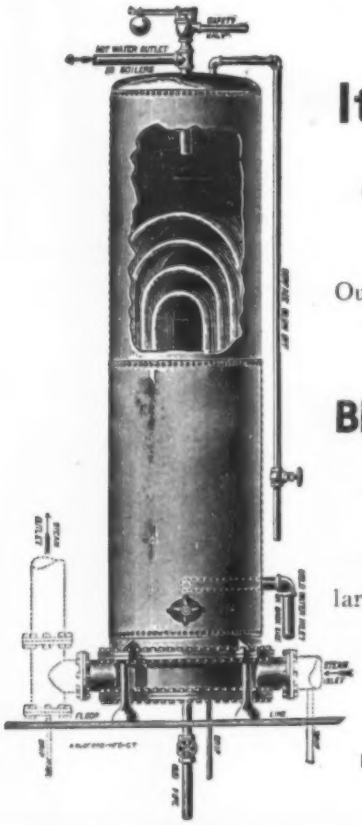

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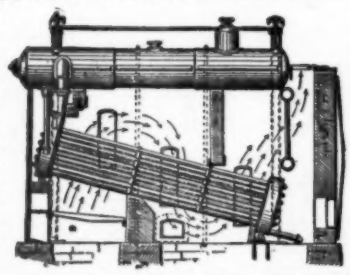

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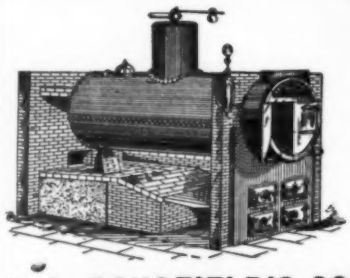

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Three outlet valves—opening consecutively as the water fills the Trap—any one of them alone capable of discharging any ordinary inflow of water. Hence the name—

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It acts instantly in emergencies. Never fails. But wastes no steam under ordinary conditions.

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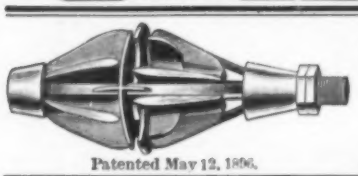

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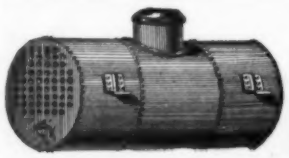

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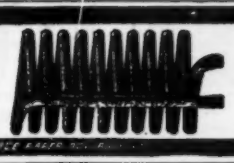

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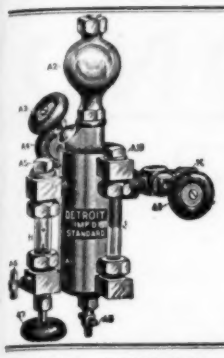

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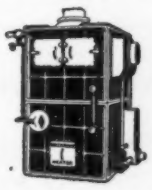

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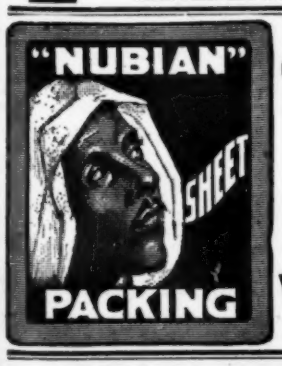

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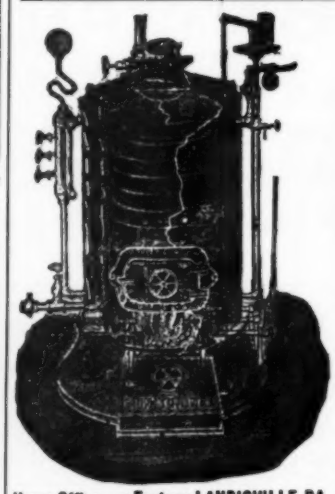

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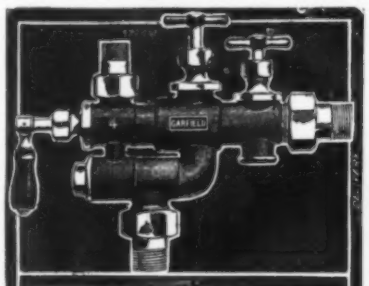

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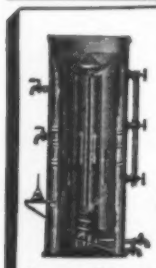

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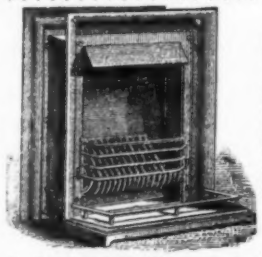

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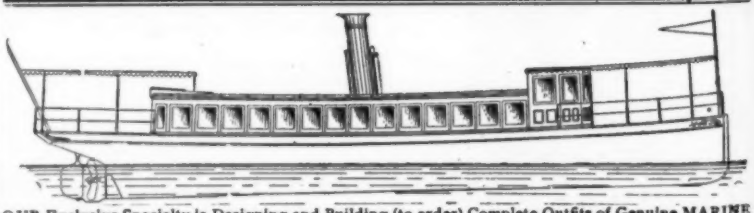

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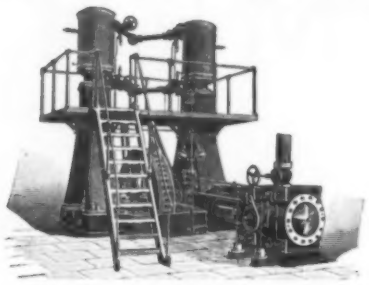

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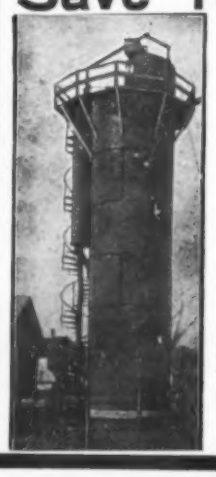

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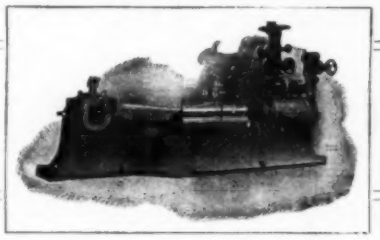

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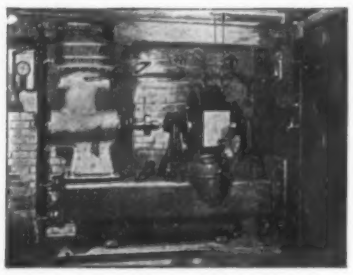

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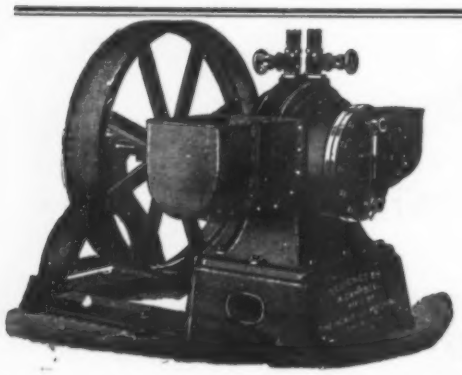

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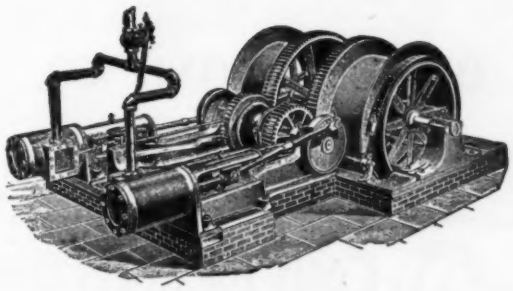

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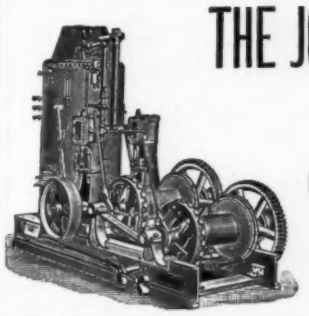

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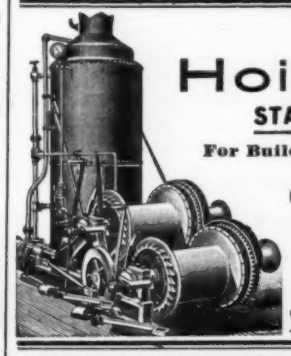

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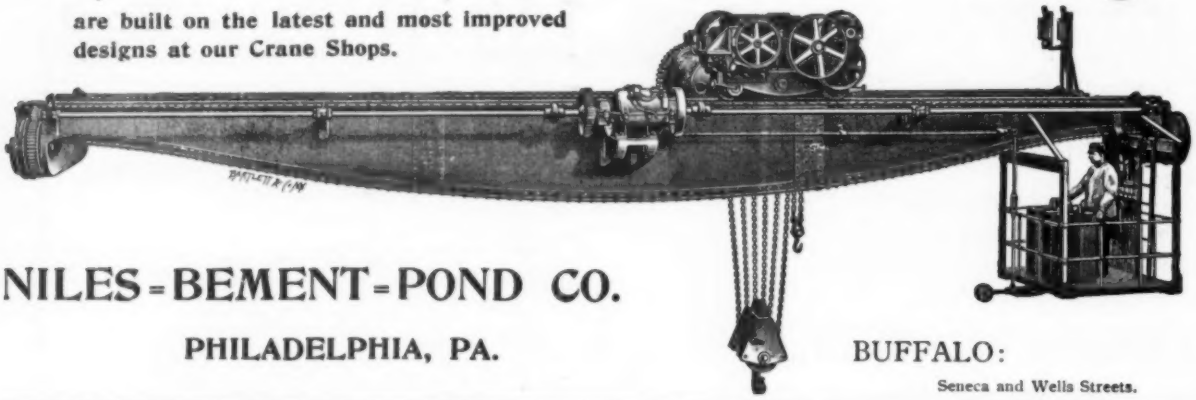

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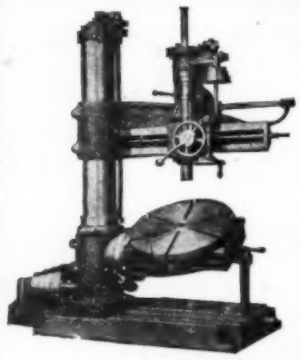

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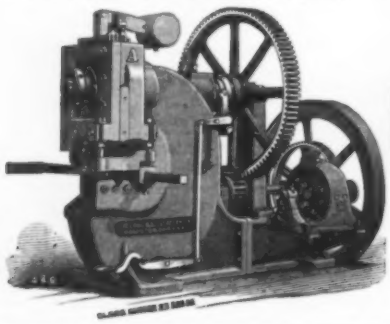

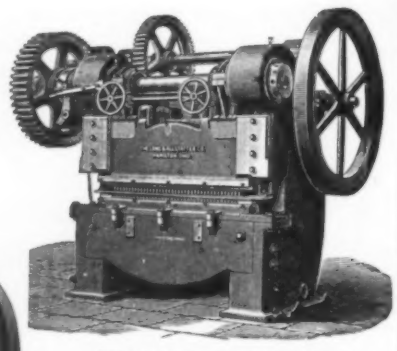

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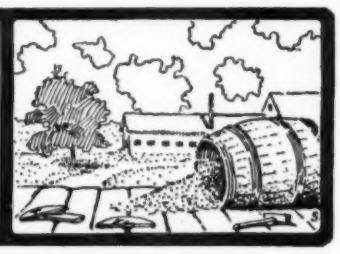

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CORUNDUM WHEELS.
Polishers and Machinists' Supplies, Rub Stones, Emery Wheel Machinery, and Diamond Tools.
Vitrified Wheel Co., Westfield, Mass.

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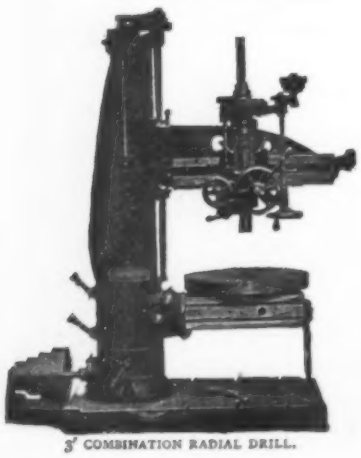

3' COMBINATION RADIAL DRILL.

Were awarded the **GOLD MEDAL,** the HIGHEST AWARD at the PAN-AMERICAN.

Here are some of the reasons why:

- Great convenience to the operator in manipulating head, back gears and tapping attachment.
- Back gears on the head, making communication direct to spindle.
- Sixteen speeds to spindle.
- No loose nuts or wrenches.
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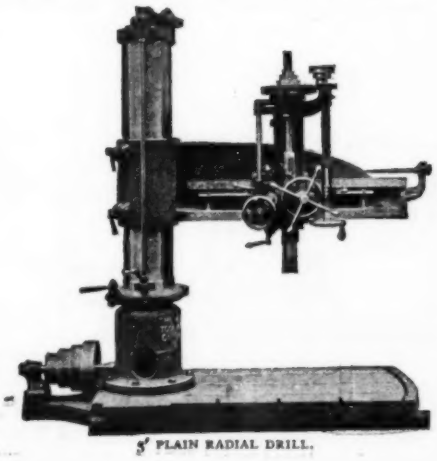
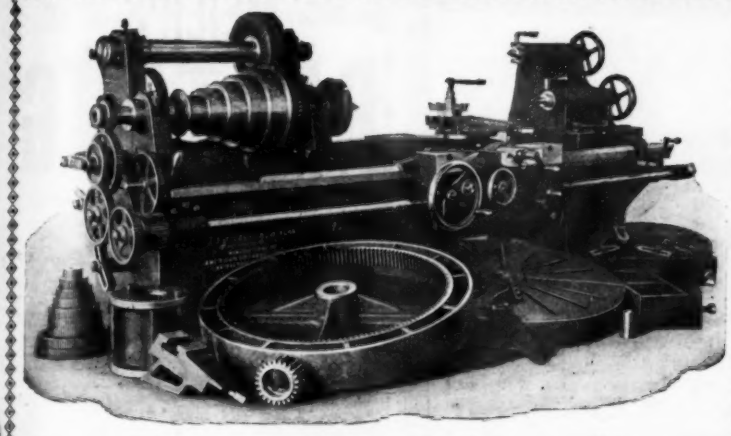
The American Tool Works Co.,
CINCINNATI, OHIO, U. S. A.



3' PLAIN RADIAL DRILL.



Floor Space Cuts Quite a Figure

in most any manufacturing establishment, and especially in those that cannot be enlarged to meet new and greater requirements. That's another manufacturing problem that my New Heavy Pattern Double Spindle Lathe will help you to solve, because it gives you two complete, high-grade lathes on one base and doesn't take an inch more floor space than a common big lathe. My old, lighter pattern is a general jobbing shop favorite, from Maine to California, and the new heavy pattern is fast gaining the same position in manufactories of all sorts where there isn't enough heavy work to keep a battery of big lathes profitably employed, but where a portion of the product calls for a big swing and good work. A powerful 26-48 inch swing manufacturing lathe, with double the screw cutting capacity of any ordinary lathe, 2¼ inch hollow spindle and every other modern feature, at less than the cost of one big lathe, ought to be worth investigating, seems to me.

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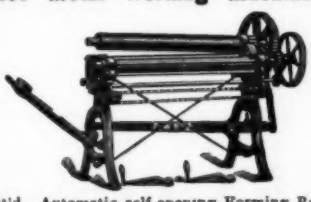

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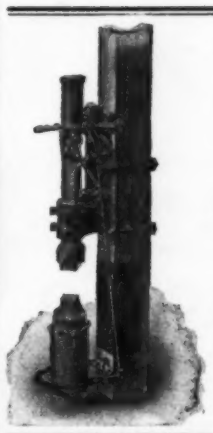

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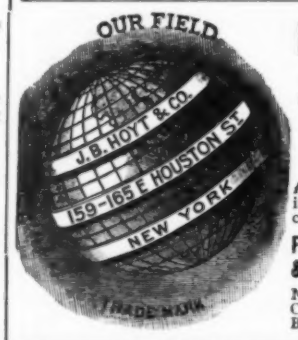

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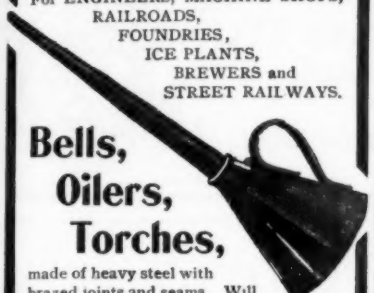

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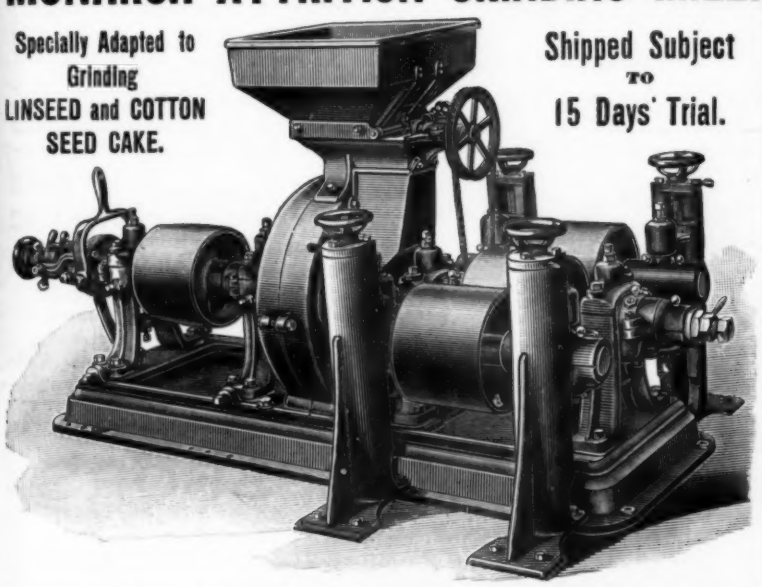
MONARCH ATTRITION GRINDING MILL.

Specially Adapted to Grinding LINSEED and COTTON SEED CAKE.

Shipped Subject TO 15 Days' Trial.



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GUARANTEED to do as much work, both as to **Quantity and Quality,** as any mill built, and the **manner** in which it is **constructed** makes it the **BEST MILL** offered to the trade. **Write for prices.**

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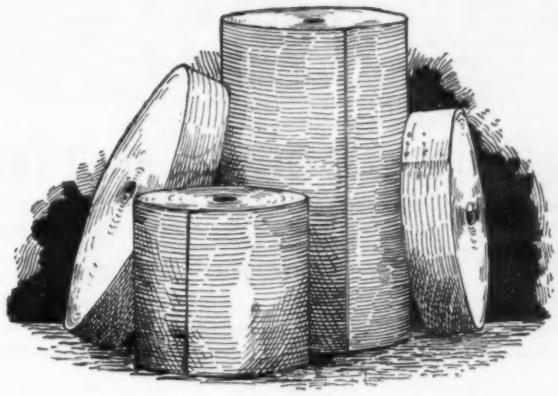

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You have power, the grain, the opportunity, price, even the building.

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Let us co-operate.

We have helped other people to instal mills in the South and make money. We can do as much for you.

We will take pleasure in corresponding with you in regard to this matter.

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ONCE TRIED ALWAYS USED.

A Strictly Short Lap Oak Tanned Belt.

BICKFORD & FRANCIS BELTING CO.,

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Important Litigation Relating to Magnesia Covering Patents.

The Keasbey & Mattison Co., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the **Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr** to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50% of magnesia, and especially coverings containing 85% of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

☞ All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. ☜

Beware of Fraudulent so-called "Magnesia" Coverings as well as those infringing on patents.

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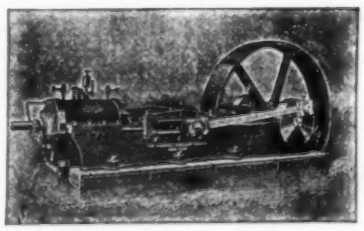

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MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XL. No. 26. WEEKLY. | BALTIMORE, JANUARY 16, 1902. | $4.00 A YEAR. SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

RICHARD H. EDMONDS, President.
THOMAS P. GRASTY, Vice-President.

OFFICE: MANUFACTURERS' RECORD BUILDING
BALTIMORE.

PUBLISHED EVERY THURSDAY BY THE

Manufacturers' Record Publishing Co.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

SUBSCRIPTION, - - - - $4.00 a Year.
TO FOREIGN COUNTRIES, - - 26s. 6d. a Year.

BALTIMORE, JANUARY 16, 1902.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

It is with profound regret that the Manufacturers' Record announces the death of Mr. R. S. Evans, who for twelve years had represented its business interests in the West. In that long period, during which he had given the most thorough and conscientious devotion to his work, there was never an occasion for a single word of criticism or complaint as to his methods or the results. Unbroken harmony existed between him and the entire force of the Manufacturers' Record, which was never marred by a single unpleasant act or word. He was known and loved by thousands, who will sadly miss him.

Virginia Mechanics' Institute.

An institution which for several years has been quietly doing an excellent work in the direction of technical training is the Virginia Mechanics' Institute at Richmond, a night school for boys, many of whom are engaged in the various trades, and take advantage of the opportunities afforded by the institution to prepare themselves for careers of skill and industry. The institute, which has as its object the promotion and encouragement of manufactures, the mechanic and useful arts, and the mental and social improvement of the industrial classes, has the active support of leading manufacturers and merchants of Richmond. It is enjoying a healthy growth, indicated by the recent erection of a new building, which will be dedicated early next month. It is hoped that the exercises upon that occasion may induce a stronger support than ever of the school by the men of Richmond.

Mississippi Bestirred.

Typical of the rapid growth of the industrial spirit in Mississippi is the fact that the State Historical Society at its last meeting welcomed a paper by Dr. A. K. Muckenfuss of Millsaps College on the history of manufactures in the State. Dr. Muckenfuss, who had the task of preparing the introduction to the census bulletin on Mississippi's industries, sketched their beginnings and their recent rapid progress, and took the ground that the State is merely at the threshold of its manufacturing career. A more notable fact, perhaps, is the visit made by the State legislature in a body to the Agricultural and Mechanical College at Starkville, which has added textile training to its curriculum in response to obvious demands, and to the Industrial Institute and College at Columbus, the first institution in the country devoted exclusively to the industrial training of girls, and one which has accomplished an excellent work upon the practical lines laid down for it in its foundation. This visit is in the nature of a technical education for not a few of the members of the legislature—that is, it is bound to impress them with the importance of liberality in appropriations for these two schools as an aid, and a powerful aid at that, to the development of the State.

Nerve.

One of the tasks which has come to the Manufacturers' Record in its work during the past twenty years of publishing information about the South has been the effort to meet reasonable requests for facts and material bearing upon Southern development which students, authors and orators needed in a hurry. When the occasion has justified, the Manufacturers' Record has taken considerable pains to accommodate these seekers, even though in many cases they have had not the least claim upon it. Very frequently the Manufacturers' Record has been called upon to furnish, at no cost to the seeker, neglecting even the ordinary courtesy of a stamp for reply, advice about investments of capital in special industries or particular places, and to perform duties which belong to the attorney-at-law, the consulting, mining or mechanical engineer, or other individuals who make their living in just that way. We have on file letters of this character, not a few of which have been preserved as specimens of a combination of petty meanness and impertinence hard to be surpassed. One of them was received the other day, and though it presents a case of innocence rather than of attempted imposition, a sentence from it is worth publishing for its nerve. The writer asked for detailed and minute facts about the manufacturing opportunities, the various kinds of business, the climate, etc., of seven small towns in the South for the benefit of an individual who is seeking a change of location to one of five States. He ended his letter as follows:

Now, you may not be prepared to give me the information, but I thought I would write to see if you could give me any information, or if you have a publication that would be valuable. I know the Manufacturers' Record would give valuable information, but it would not justify me to pay enough to become a regular subscriber.

THE SOUTH A BILLION-DOLLAR MANUFACTURER.

The South has become a manufacturer on a billion-dollar scale—indeed, it were better to say on a billion-and-a-half-dollar scale; for the value of the products of its factories in 1900, according to preliminary figures of the twelfth census, was $1,466,669,495, greater by nearly $450,000,000 than the value of the products of manufactures in the United States in 1850. The total for 1900 shows an increase of $549,440,468 over the total of 1890 in the value of products, and of $494,874,237 in the amount of capital invested, which in 1900 amounted to $1,153,670,097. The growth in both these particulars is shown in the following table:

States.	Capital. 1890.	Capital. 1900.	Increase. Per cent.	Value of Products. 1890.	Value of Products. 1900.	Increase. Per cent.
Alabama	$46,122,571	$70,370,081	52.6	$51,226,605	$82,793,804	61.6
Arkansas	14,971,614	35,960,640	140.2	22,659,179	44,883,783	98.1
District Columbia	28,652,132	41,981,245	46.5	38,971,419	47,667,622	23.3
Florida	11,110,304	34,473,997	210.3	18,222,890	38,189,894	109.6
Georgia	56,921,580	89,789,656	57.7	68,917,020	106,654,527	54.8
Kentucky	79,811,989	104,030,791	30	126,719,857	154,590,069	22
Louisiana	34,754,124	113,084,294	225.3	57,806,713	121,181,683	109.6
Maryland	119,667,316	163,422,260	36.5	171,842,593	242,752,990	41.3
Mississippi	14,896,884	35,807,419	140.4	18,705,834	40,431,386	116.1
North Carolina	32,745,995	76,503,894	133	40,375,450	94,919,663	135
South Carolina	29,276,261	67,356,465	130.1	31,926,681	58,748,731	84
Tennessee	51,475,092	71,222,630	38.3	72,355,286	107,527,060	48.6
Texas	46,815,181	90,433,882	93.2	70,433,551	119,414,982	69.5
Virginia	63,456,799	103,512,855	63.1	88,263,824	132,735,620	50.2
West Virginia	28,118,030	55,719,938	98.2	38,702,125	74,177,681	91.7
Total South	$658,795,960	$1,153,670,097	75.1	$917,229,027	$1,466,669,495	59.9

Final revision and the official publication may modify the figures to some slight extent, though not sufficiently to change materially general results. In their present form they show that the average rate of increase of capital in the South during the ten years was 75.1, and that the rate in the District of Columbia and six States was below the average. The rates in the eight other States were as follows: Louisiana, 225.3; Florida, 210.3; Mississippi, 140.4; Arkansas, 140.2; North Carolina, 133; South Carolina, 130.1; West Virginia, 98.2, and Texas, 93.2. Louisiana led in the actual increase of capital, $78,330,173, with North Carolina second, $43,757,899; Maryland third, $43,754,944; Texas fourth, $43,618,701, and Virginia fifth, $40,056,056. Maryland led in the amount of capital invested in 1900, $163,422,260, with Louisiana second, $113,084,294, and Kentucky third, $104,030,791.

In the value of products the rate of increase was below the average rate for the South, 59.9, in the District of Columbia and five States, the rates in the other States being, North Carolina, 135; Mississippi, 116.1; Florida, 109.6; Louisiana, 109.6; Arkansas, 98.1; West Virginia, 91.7; South Carolina, 84; Texas, 69.5, and Alabama, 61.6. In actual increase Maryland led with $70,910,397, followed by Louisiana, $63,374,970; North Carolina, $54,544,213; Texas, $48,981,431; Virginia, $44,371,796; Kentucky, $37,870,212; Georgia, $37,737,507; West Virginia, $35,475,556; Tennessee, $35,171,774; Alabama, $31,567,199; South Carolina, $26,822,050; Arkansas, $22,224,604; Mississippi, $21,725,552, and Florida, $19,967,004.

The marked differences between the actual increases in Maryland, $70,910,397, and in North Carolina, $54,544,213, in comparison with the difference, 41.3 and 135, in the percentages of increase in those two States, respectively, or the slight difference between the actual increases in Kentucky, $37,870,212, and in Georgia, $37,737,507, in comparison with the rates of increase in those two States, 22 and 54.8, must be taken into consideration in estimates of the advance of separate Southern States in comparison with each other. The reasons for this appear when the totals of the South are compared with the totals for other groups of States or for separate States elsewhere, as shown in the following table, giving the figures which have become available:

States.	Capital. 1890.	Capital. 1900.	Increase. Per cent.	Value of Products. 1890.	Value of Products. 1900.	Increase. Per cent.
Connecticut	$227,004,496	$314,696,736	38.6	$248,336,364	$352,824,106	42.1
New Hampshire	79,375,160	100,929,661	27.2	85,770,549	118,669,308	38.4
Rhode Island	126,483,401	183,784,587	45.3	142,500,625	184,074,378	29.2
Vermont	32,763,291	48,547,964	48.2	38,340,066	57,646,715	50.4
Total	$465,626,348	$647,958,948	39.1	$514,947,604	$713,214,507	38.4
Colorado	$26,651,840	$62,825,472	135.7	$42,480,205	$102,830,137	142.1
Idaho	1,048,916	2,941,524	180.4	1,396,096	4,020,532	188
Iowa	77,513,097	102,733,103	32.5	125,049,183	164,617,877	31.6
Kansas	43,926,002	66,827,362	52.1	110,219,805	172,129,398	56.2
Montana	4,293,794	40,945,846	853.6	5,507,573	57,075,824	936.3
Nevada	1,211,269	1,472,784	21.6	1,105,063	1,643,675	48.7
North Dakota	2,894,553	5,396,490	86.4	5,028,107	9,183,114	82.6
South Dakota	3,207,796	7,578,895	136.3	5,682,748	12,231,239	115.2
Utah	6,583,022	14,650,948	122.6	8,911,047	21,215,783	138.1
Wyoming	1,411,184	2,411,435	70.9	2,367,601	4,301,240	81.7
Total	$168,741,473	$307,783,859	82.3	$307,747,428	$549,248,819	78.4
Arizona	$616,629	$10,157,408	1,547.2	$947,547	$21,315,189	2,149.5
Indian Territory	204,329	2,624,265	1,184.3	248,932	3,892,181	1,463.6
New Mexico	965,938	2,698,786	179.4	1,516,195	5,605,795	269.7
Oklahoma	95,519	3,352,064	3,409.3	180,445	7,083,938	3,825.8
Total	$1,882,415	$18,832,523	900.4	$2,893,119	$37,897,103	1,209.9
Delaware	$33,695,400	$41,203,239	22.3	$37,571,848	$45,387,630	20.8
Oregon	$32,122,051	$33,422,393	4	$41,432,174	$46,000,587	11

In ten States west of the Mississippi river—Colorado, Idaho, Iowa, Kansas, Montana, Nevada, North Dakota, South Dakota, Utah and Wyoming—in which the value of products ranged in 1900 from $1,643,675 in Nevada to $172,129,398

in Kansas, the increase in capital invested from $168,741,473 to $307,783,859, or $139,042,386, was less than one-third of the increase of that in the South, and the increase in the value of products from $307,747,428 to $549,248,819, or $241,501,391, was less than one-half of that in the South, while the percentages of both increases in the West, 82.3 and 78.4, respectively, were in advance of the Southern percentages. So in the four Territories, where there has been an immense advance comparatively, the 900.4 per cent. of increase in capital represents only the difference, $16,950,108, between $1,882,415 and $18,832,523, and the 1209.9 per cent. of increase in value of products represents but $35,003,984, the difference between $2,893,119 and $37,897,103. The increase in capital in the four Territories is less than half the total actual capital now invested in any one of the Southern States, while every one of the Southern States produced to a value greater than the total of the value in the four Territories.

Illustration in another direction is offered in the exhibit of four New England States—Connecticut, New Hampshire, Rhode Island and Vermont. They increased their capital from $465,626,348 to $647,958,948, or $182,332,600, equal to 39.1, and the value of their products from $514,947,604 to $713,214,507, or $198,266,903, equal to 38.4. The capital of these four States in 1900 was more than half of that of the South, and nearly twice that of the ten trans-Mississippi States and the four Territories mentioned, and the value of their products was nearly half the value of the Southern products, but only about $126,000,000 more than the total in the other group of States and Territories.

The value of Delaware's products, $45,387,630, and of Oregon's, $46,000,587, showed an increase much below the average of the New England group, and still much less than that of the Southern.

The combined capital of the sixteen States outside the South and the four Territories increased from $702,067,687 to $1,049,200,962, or $347,133,275, equal to 49.4, and the value of their products from $904,592,173 to $1,391,748,646, equal to 53.8 per cent., the actual increases and the rates being below those of the South, while the increase of combined capital in the thirty States, including those of the South, the four Territories and the District of Columbia, from $1,360,863,547 to $2,202,871,059, or $842,007,512, was but 61.8 per cent., which should be compared with the 75.1 per cent. of the South, and the increase in the combined value of products from $1,821,821,200 to $2,858,418,141, or $1,036,596,941, was but 56.8 per cent., also less than that of the South.

Though two or three of the Southern States have not made the advance in manufacturing, in comparison with others of that section, justified by their possession of great stores of raw material, the South as a whole has made a gratifying advance; but it has by no means come up to its capabilities in that respect. This will be the more apparent when the figures for such great manufacturing States as Massachusetts, New York, New Jersey, Pennsylvania, Ohio and Illinois are made public. These States contributed more than half to the total value, $9,372,437,283, of the products of the United States in 1890. During the previous decade the rate of increase in the country was 120 per cent. for capital and 69 per cent. for the value of products. The value of the South's products was less than the tenth of the total of the whole country in 1890. At the time of the taking of the last census the industries of the United States had reached a climax of the greatest era of activity in their history, and were in the midst of the movements for consolidation of a number of the leading interests. These facts make it exceedingly difficult to estimate upon figures at present available the possible totals of capital and value of products in the country for 1900. But, with a few notable exceptions in the South, and especially in the Territories and adjacent States, where great percentages, marking entrance upon the industrial stage, stand for comparatively small actual increases, there has been in the past ten years a general decrease in the rate of advance, both in capital and in the value of products, in the States of which the figures have been announced. Taking, for instance, three States in which manufactures are of importance—Connecticut, Rhode Island and Iowa—the percentage of increase in capital fell from 87 to 38.6 in the first, from 68 to 45.3 in the second, and from 133 to 32 in the third, and in value of products advanced from 34 to 42.1 in the first, and fell from 34 to 29.2 in the second, and from 76 to 31.6 in the third.

These changes may not be typical of the general tendencies in their respective sections, but it is hardly to be expected that the rate of increase in the whole country should have been as great as during the decade ending with 1890, as the percentage of increase must almost necessarily decrease with the growth of the magnitude of manufacturing interests. Judging, however, by the totals of the States on which reports have already been made by the census, it seems probable that the capital invested between 1890 and 1900 will show an increase of about 100 per cent., and the value of products of about 55 per cent. But even at this rate of growth (and these are purely estimates based on the returns from the States already mentioned) the total growth of the manufacturing interests of the country during the last ten years is amazingly great. These estimates would indicate that the amount of capital invested in 1900 in all manufacturing interests was somewhere about $12,500,000,000, and the value of the products about $14,500,000,000. These are, of course, the merest kind of tentative figures, and they are mentioned to show that the relative position of manufacturing in the South and in the rest of the country does not seem to have changed materially, in spite of all that the South has accomplished in the past decade. Notwithstanding our unmatched resources and the progress which we had made up to 1890, which ought to have given us the opportunity of very far exceeding our relative manufacturing industry as compared with the total of the country, the present figures indicate that while we have probably fully kept abreast of the general industrial development of the United States, we have not accomplished quite as much as we ought to have done, and this fact should spur the South to greater endeavors to use its vast resources for its best advantage.

A dispatch from Columbia giving a forecast of this year's session of the South Carolina legislature states that there seems to be very little definitely decided about what is to be done at the session, but that the principal features will be anti-trust legislation, while the child-labor bill and the matter of compulsory education are likely to consume much of the time. This program is rather a gloomy one for South Carolina. If it be carried out, much valuable time will be wasted, if, indeed, a serious blow is not inflicted upon the State.

Using American Brains Abroad.

In one day last week announcement was made of plans for the introduction of American machinery, etc., into Asia, Africa, Europe and Latin America. The Beers Consolidated Diamond Mines of Kimberly, South Africa, awarded contracts to American concerns for structural material and a complete electrical plant valued at $200,000, and also for pneumatic equipments and several machine tools; a Japanese company let the $800,000 contract to American firms for the first electric traction line in Tokio; a State of Mexico arranged with a New York company for the construction of a $500,000 gas plant for illuminating and fuel purposes in Monterey, and a joint stock company was organized at Paris, with a capital of 20,000,000 francs, to extend the sale of the Westinghouse electrical equipment on the Continent. This sort of enlargement of American industrial operations has been in progress for several years, with ever-increasing momentum, and now to the acquisition of American equipment is being added the use of American brains and experience in handling it. Germany has, perhaps, led in this respect, but Great Britain is not far behind.

Illustrative of the latter country's ambitions is the recent selection by an iron manufacturing firm in Wales of a young American engineer, Mr. Arnold K. Reese, to manage its plant. The firm is Guest, Keen & Co., who own large works at Dowlais and Cardiff, and Mr. Reese, who has worked at the Maryland Steel Co.'s plant at Sparrow's Point, Baltimore, is leaving the management of the Pennsylvania Steel Co.'s Lebanon Furnace at Lebanon, Pa., purchased last July from the Debbie Coleman estate, to manage the Cardiff plant of four furnaces, where he will introduce American methods and organization. The Manufacturers' Record is informed that two furnaces of this plant will be at once rebuilt by Messrs. Frank C. Roberts & Co., blast-furnace engineers, of Philadelphia, Pa., on modern American lines throughout. The other two will be operated until the first two have been completed, and they, too, will then be rebuilt. The selection of Mr. Reese in this connection is a distinct recognition of his ability and capacity, exceedingly gratifying to everybody taking pride in the attainment of American engineering, and is an acknowledgment of the great strides which that profession has made and is making.

At the same time it suggests rather an interesting possibility of a not distant future. The perfection which American practice has reached, and the impetus given by it, and, through the recent combinations in the iron and steel industry, to an expansion of the trade abroad in its products, have been enough to put the Old-World manufacturers on the alert. They have not been slow to adopt the most obvious policy—that is, to meet American competition not only with American machines, but with American talent. What the outcome may be may not be definitely stated, but the contest will be watched with profound interest by those persons who realize that the greatest era in world industry has just opened. In the meantime, success to every young American who receives a flattering offer like that of Mr. Reese's to enter the foreign field.

Texas Bound to Win.

Texas, which has come to the front in the last few years as an example for its sister States of the South in so many directions, has just set the pace again in the selection of Mr. John H. Kirby of Houston as the president of the Texas commission charged with the task of giving that State an adequate exhibit at the Louisiana Purchase Centennial Exposition next year. Mr. Kirby has in himself shown what a Texan may become. He has been an active promoter of the material advancement of the State, and the State recently showed its appreciation of his untiring efforts in the banquet given him at Houston marking his successful financing of his great Kirby Lumber Co. He is a man accustomed to do things. He is full of the energy and ambition of young manhood, and he has started already to make good the resolution that Texas shall not be outdone by any State at the exposition. In an interview at Houston he explained the close relations existing between Texas and St. Louis, and the conviction of substantial Texas citizens that not to be represented will be of great detriment to Texas. Mr. Kirby alluded to the great oil fields of the State, the millions of acres going into rice, sugar and tobacco culture, and the prosperity of the planter, the cattle-grower and the lumber producer, adding to the wealth of the banker, the merchant and every other citizen of the State. But he is not content with past achievements or present healthy conditions. He knows that Texas has really only begun to move. He says that it wants new people and new money, and he sees in a magnificent exposition of its resources at St. Louis and the personal missionary work which 350,000 visitors from the State may do there a large opportunity for a marked advancement upon solid lines. At a dinner tendered him and his fellow-commissioners by the Dallas Commercial Club on January 7 he said:

> We must make up our minds that Texas will be fittingly represented, quit losing time in making objections and put our shoulders to the wheel to carry out any plan or scheme of exhibit which the majority decide will bring the best results.
>
> The railroad service between Texas and St. Louis is excellent, and as a direct result of the showing we will make at that great exposition we should be able to induce at least 1,000,000 people to visit this State and see for themselves the almost innumerable opportunities for safe and profitable investments. Texas has millions of acres of as good lands yet unoccupied as similar lands which sell in States like Illinois and Indiana for from $50 to $150 an acre. By bringing an additional 1,000,000 people into Texas we will not only benefit them, but add enormously to the value of the property of every citizen of this State, let him be planter, farmer, merchant, banker, manufacturer or a follower of any other avocation. It would be merely a waste of your time for me to go into details relative to the numerous resources of this State. Those of us who are assembled here are familiar with Texas. We want to use the great exposition at St. Louis as a medium through which we will acquaint many more millions of people with what we already know. It was not my purpose to come here to present any special plan or scheme; there are others more capable than myself to carry out that portion of the work; but I do wish to plead with you and to urge the press and the people universally over the State to stop making objections. If you can't help Texas along its onward march, don't be a stumbling-block. It is an old and trite saying that "sugar catches more flies than vinegar," and encouragement is worth a thousand times more as an asset than ob-

jections. Let us decide upon some plan and get to work, and if we find those who can't assist us, let us at least plead with them not to get in the way. Texas can't afford not to be creditably represented at St. Louis, and I believe the work toward that end has been well started and should be prosecuted without hesitation until we make a magnificent finish.

This is the right kind of talk, and Governor Sayers in appointing Mr. Kirby as the head of the commission made no mistake. If the other Southern States have commissions with members such as Mr. Kirby, the whole section may expect to be benefited at St. Louis as it has been by no other exposition.

Oil Burners for Syria.

In a letter to the Manufacturers' Record Mr. F. M. Elias, machinery agent of Damascus, Syria, who has spent some of the best years of his life in the United States with a view to fitting himself for the industrial development of his country, says:

"The oil-engine question was the subject of study for me all the time. This country is wanting in flour mills and in pumping machines for irrigation purposes. In both cases the oil engine has to be used as motive power, for other fuel than oil is very expensive. We wish to introduce an engine, first-class and guaranteed, which must compete in price with those of German, French and English make. In this respect the American engine ought to do better than all the rest, and if it does, it can cover this market.

"We have on the market at Damascus a small cooking stove, imported from Stockholm and using Russian petroleum as fuel. Its retail price is $2.50. It is selling very well. Its tank is made of sheet brass. A larger one made on the same principle, such as America produces, with cast-iron castings, will sell well. A small stove of good appearance to burn petroleum for heating rooms in dwellings will also have a very good sale.

"I am in the market for a small complete ice-making plant with a capacity of from one ton to two tons a day. Results must be guaranteed, and quotations and specifications, with full particulars, are invited. I am also in the market for a printing press, foot-power, to print a sheet of paper thirteen inches wide by twenty long."

Coal Machinery in Europe.

In a letter to the Manufacturers' Record Mr. W. R. B. Lockie of South Castle street, Liverpool, England, writes as follows:

"Most coal-mining in America is undertaken in a far more businesslike manner than in Europe. Besides, American mining machinery, implements and tools are far ahead of similar appliances employed in Europe. As a consequence there would be here, I think, a fair scope for the sale of American coal-mining implements. Personally, I am pretty confident I could place some on this side. Of course, the apparatus in question would have to be adapted to deep-level minings, galleries and shaftings.

"Owing to the relative scarcity of coal in Europe, and the consequent enhancement in the price thereof, attention is being turned here to the substitutes for coal, and patentees or makers of machinery for the treatment of peat or lignite, with a view to turning them into briquettes or otherwise enhancing their transportability and caloric qualities, might find it to their advantage to communicate with me.

"Oxygen is constantly being more frequently used for medical and other purposes. As no doubt American machinery for the production of this gas is superior to similar apparatus used on this side, I should like to hear from the United States patentees or makers of machinery for the production of oxygen."

Looking for Factories.

Mr. C. C. Waller of Stoneham, Texas, writes to the Manufacturers' Record that that town is offering a bonus for any kind of a manufacturing plant from a broom factory to a cotton mill. He believes that the opening up of immense tracts of hardwood timber by the Texas Northern Air Lne makes Stoneham especially favorable as a site for the manufacture of furniture, barrels, handles, etc. The town is convenient to oil and coal fields.

Southern Brick for Cuba.

The Manufacturers' Record recently called attention to the shipment of brick from Monterey, Mexico, to Cuba, and suggested the possibility of Southern brickmakers finding a market in Cuba. Called forth by that suggestion, we have received several letters from large brick concerns in the South stating that they have been considering the matter of shipping brick to Cuba, but have not been able to get in touch with the right parties. Cuban buyers of brick would doubtless find it to their advantage to take up this question and look into the feasibility of buying brick made in the Central South.

Special Days at Charleston.

Many special days have already been set aside at the Charleston Exposition. January 21 and 22 will be the days devoted to the Travelers' Protectve Association, and January 27 will be Cincinnati Day. There are many other important events already arranged for. Among these are the meeting of the American Poultry Association, on January 28; the Woman's Suffrage convention, on February 11; February 12, President's Day; February 14, Woodmen Day, and also the day for the State of Oregon; February 19, Pythian Day; February 20, West Virginia Day; February 22, Military Day; February 25, Illinois Day. The people of Chicago and Illinois are trying to arrange for an expedition to Charleston on Illinois Day of the Cook county and Marquette and a number of military organizations from Chicago. The two weeks beginning March 2 and ending March 15 will be known as "Old Home Weeks" at the exposition, when all South Carolinians and descendants of South Carolinians will assemble in Charleston; March 27, Louisiana Day; March 29, Concatenation of Hoo-Hoos; April 1 to 6, Virginia Polytechnic Institute; April 8, Limestone College Day; April 9, Improved Order of Red Men of the State of South Carolina—Charlotte Day; April 7 to 14, North Carolina Week; April 21 to 28, Virginia Military Institute Week; April 24, Grand Lodge, Junior Order United American Mechanics; May 7, State Bankers' Association; May 8, Southern Cotton Spinners' Association; May 13, Independent Order of Odd Fellows. There will also be a Maryland Day, a Baltimore Day, a Richmond Day, a Manhattan Day and a New York State Day, and the governors of most of the other States have under consideration the appointment of days for their respective States.

A committee representing the National Rivers and Harbors Congress, which met in Baltimore last October, submitted this week to the proper committees of the House and Senate the resolution adopted by the Congress favoring liberal appropriations and intelligent progressive action for harbor improvements in the country.

Conciliation and Arbitration in the Coal-Mining Industry.*

By Herman Justi, Commissioner Illinois Coal Operators' Association.

The title of this paper would give the impression that a uniform system of conciliation and arbitration designed to settle disputes and to prevent strikes is in general use in the coal-mining industry throughout the country. Unfortunately, this is not the case. I am not prepared to say exactly how these troubles are treated in other States, and shall, therefore, confine myself to the coal-mining industry of Illinois.

The plan pursued in Illinois, it is fair to state, has been made possible by reason of the existence of what is known as the interstate joint movement. By the interstate joint movement is meant the movement inaugurated in January, 1898, following the sad and memorable strike of 1897, by the coal miners and coal operators of Pennsylvania, Ohio, Indiana and Illinois, whereby the two interests adopted a system of joint agreements under which the mining scale, the scale of wages and the mining conditions are agreed upon for what is known as the basing point in each of the States named, and these, while always agreed upon during the joint convention in January and February of each year, do not become effective until April 1 following.

After the interstate convention the coal operators and the coal miners of these respective States are accustomed to meet in joint State convention and enter into another agreement determining mining rates based on basic rates theretofore agreed upon in the interstate convention, and to agree upon such wages and mining conditions not common alike to all the four States, but peculiar to and necessary for each State.

In Illinois, where the mining conditions vary more than in other coal-producing States, and where the State is divided into nine scale districts, and some of these into subdistricts, and where it is sometimes necessary for individual mine owners or mining companies to act independently of all other mines because of exceptional or unusual conditions, the coal operators and coal miners, after the adjournment of the joint State convention, hold what are known as subdistrict or district conventions, or local conferences, and agree upon wages and mining conditions suited to the peculiar needs of these respective districts or mines.

To establish a better understanding of the objects of these numerous conventions, it may be well to observe that, primarily, the interstate joint movement is founded upon the idea of uniformity based upon equitable trade or competitive conditions.

After the several conventions or conferences in which the coal miners and coal operators have had their hand-to-hand fights and their heart-to-heart talks, it is fair to assume that both miners and operators should have reached a pretty clear understanding, not so much as to what each side believed itself entitled, but as to what it was possible for each side to get, and what must satisfy them during the contract year, and yet time, money and men are employed to prevent strikes and lockouts and to settle differences and disputes.

After an agreement has once been reached in this manner, it still remains to be seen, despite all the safeguards and precautions provided, how well all of its conditions have been carried out, both by the employer and the employe, when the record is complete and a balance struck at the close of the contract year.

The officials of the Mine Workers' Union of the State of Illinois, as the representatives of the miners, see to it that the miners' rights under the terms of the several joint agreements are fully protected, while the commissioner of the Illinois Coal Operators' Association, on the other hand, representing the employer class, contends for compliance with these same joint agreements in behalf of the operators. Jointly, the representatives of these two organizations are expected to enforce upon the members of both faithful compliance with these agreements; to take up and consider all differences and disputes arising during the contract year, and perform all such useful offices as seem necessary for preserving harmony in the coal-producing industry of the State.

Surprise is often expressed that, despite so many safeguards and precautions—despite so fair a scheme of mutual protection—differences, disputes and conflicts nevertheless occur daily somewhere throughout the State. There is, perhaps, something in or about the atmosphere of a mine that breeds conflict—there may be something in the nature of the work of miners calculated to unduly arouse in their breasts the rebellious spirit implanted in our common humanity—but be this as it may, the mining camp has been a veritable battleground, here and elsewhere, from time out of mind. Here is presented a fruitful field for the work of a speculative philosopher, but this paper is presumed to treat only of actualities—of stubborn, difficult, irresistible facts—and I shall not venture into the realm of speculation.

Why, then, is there so much trouble in enforcing an agreement so carefully prepared and seemingly so equitable in all its provisions?

Speaking of the coal industry of Illinois, it may be safely suggested that the great difficulty of enforcing strict compliance with these carefully-prepared agreements is due to the fact that the mining conditions of the State vary more than anywhere else in the country; that there are over 800 coal mines in the State, of which about 600 represent only 5 per cent. of the shipping mines; that of the 40,000 miners employed, fully 40 per cent. are ignorant of our language; that these agreements are made with an organization of laborers as yet not strong enough to always rigidly enforce them, and that employers of labor have until recently each fought the fight in his own way, regardless of consequences entailed upon the coal industry as a whole. It is, then, not so strange, after all, that operators still concede demands of the miners which prove dangerous and mischievous precedents, and that it is, therefore, necessary each year that our joint contracts be drawn with increasing care and precision. Otherwise the miners, with the union behind them, and knowing, as they do, a weak employer's anxiety to keep his mines going at almost any sacrifice, would be uncontrollable. Even so, unjustified demands are made, despite pledges and promises, and, therefore, in the hope of preventing, if possible, any unwarranted demands being made during the contract year, a concluding clause has been inserted in the last two State agreements, which provides that "there shall be no demands made locally that are not specifically set forth in this agreement, except as agreed to in joint subdistrict meetings held prior to April 1." In spite of this wise provision, demands have been

*From a paper read before the American Economic Association.

made locally, and much too often foolishly conceded; but, considering the vastness and variety of the coal industry, these have been, comparatively speaking, very few in number, and in themselves trifling in importance; but a concession made, however trifling, is a dangerous precedent, for which the discipline of the miner and the interests of the owner always pay dearly sooner or later.

I am expected to describe the system of conciliation and arbitration in use in the coal-mining industry of Illinois. There is not much to describe. There is not really much system about it. It is, after all, nothing more than a simple, effective, humane, common-sense arrangement of getting together on common ground in the hope of reaching a fair understanding. It is nothing more nor less than a sort of balance-wheel of a great industry—albeit a device intended to keep the men at work long enough to enable them and their employers to think calmly and dispassionately over questions in dispute, certain that if this is done a fair adjustment of all differences will surely be made; in fact, our joint agreements provide that where differences or disputes have arisen "the miners and mine laborers and parties involved must continue at work pending an investigation and adjustment." At a period not very remote it was the universal custom to stop a mine whenever any dispute arose or when a demand was made, and idle it remained until the operator yielded or the miners were exhausted. This clause of the joint agreement is still violated far too often; but even so, it is a tremendous advance movement which has resulted in great saving of time and money to master and men alike. In the hope of still further abating this annoying and costly practice, the miners' organization, at its annual convention of 1901, incorporated a clause in its constitution imposing a fine of "ten dollars upon each miner who from any cause threw the mine idle." Where this penalty is rigidly enforced it has had a salutary effect, but for reasons which must be apparent the penalty has not always been imposed.

In another year it is to be hoped that the penalty will not only be more rigidly enforced, but the United Mine Workers will go even further, and for flagrant violation of the agreement make the punishment, if necessary, expulsion from the union. This may seem to be undue severity, but if the penalty is inflicted only a few times we shall see vastly fewer flagrant violations of the agreement. The miners' organization, like a chain cable, cannot be stronger than its weakest link, and if it be weak at any point it is just where it should be strongest, and that is in its ability to enforce compliance with the contracts entered into between the two organizations. The power of the organization is, as I have said on another occasion, not great enough save where its power is unhappily used for mischief. A firm believer in and advocate of organization, both of the labor and the capital classes, this frank criticism of existing conditions seems necessary. Lest I be accused of neglecting to suggest a penalty to be imposed upon employers shutting down their mines contrary to agreement, or otherwise flagrantly violating it, I beg to say that the Illinois Coal Operators' Association in its constitution makes ample provision for the punishment of its members thus guilty of bad faith; but even were it silent on the subject, or if the operators failed to enforce any prescribed penalties, the miners have it in their power to discipline them, which they always do, and sometimes unlawfully, because they too often convict and punish them before trial.

While I shall try to plainly describe the plan of conciliation and arbitration pursued in Illinois, still it seems that what you most desire to know is not so much how differences and disputes are settled, but what it is that occasions these differences and disputes, and how to prevent them, for it is easy enough for fair men of average intelligence to determine upon a plan by which their difficulties may be settled if they can only be brought to agree upon the real causes leading up to these difficulties. This is our objective point in Illinois.

With scarcely an exception, every strike that has taken place in our time, even where there has been bloodshed and destruction of property, has finally been settled in friendly council. Our plan is to prevent these senseless and costly strikes, and the many differences and disputes arising between master and men, which seem to place them in the attitude of enemies to each other, are settled in the same manner in which the most destructive strikes are finally settled, viz., by meeting in friendly council, where we try self-control long enough to enable us to say: "Come, let us reason together." This is, practically, all there is of the plan pursued in the coal-mining industry of Illinois, and of this plan to prevent strikes and to promote harmony and good feeling it can be said, at least, that it is the fairest thus far offered. Under it every inducement for doing right and of avoiding conflict is afforded, and its application proves that such a plan could only have been inspired by high and honorable motives. This honest tribute is due the coal operators of Illinois, who inaugurated the plan in their State, and to the officials of the mine workers, who have cordially supported it. And yet the plan is not perfect; it is only a beginning, but it is a good and hopeful beginning, as I shall endeavor to show, and that the plan will be amplified and improved I confidently believe, and the sooner all the coal-producing States organize for the purpose of dealing with labor questions, the sooner this amplificaton and improvement will occur. What we need in the meantime is patience with our present ills and a steady purpose to keep faith in holding to agreements which we are ever trying to make plainer in their language and fairer in their provisions. In truth, growing experience has made it possible to draw these agreements so that they are becoming ever more and more exact each year, the aim being to make the language and terms used so plain that the chances of misunderstanding any of the terms of the compact are steadily reduced. Disputes arising during the year which have not been covered by the provisions of the current contract have been taken up at the next annual convention and clauses inserted in the new agreement designed to cover them, so that, seemingly, nothing is left in doubt.

As for the plan pursued in settling all questions referred to the Illinois commission, it is very simple. When the disputes or differences arise the representatives of the United Mine Workers meet us by agreement, and with them the miners and operators who are directly interested. Together these representatives of the two interests, without observing any prescribed form, meet and proceed to hear testimony, with a view to eliciting all the facts bearing upon the questions involved. There is seldom any attempt made to gain any advantage by confusing witnesses, and every time it is attempted the difficulties of settlement are at once increased. Our aim is to encourage witnesses to tell the truth, in order that disputes, if settled at all, may be settled upon their merits solely. The main idea of these investigations is to bring out clearly the exact facts, and when this is done we have found that nearly all ordinary troubles adjust themselves before we have been a great while in session. The great advantage of such meetings is that it affords employer and employe an opportunity to meet upon common ground, and that long-standing grievances for which there had been little or no foundation can be brushed aside, and that the representatives of miners and operators alike can avail themselves of an excellent opportunity to explain the meaning of the joint agreements, the purposes they are intended to serve and the importance of complying with the spirit as well as the letter of such agreements.

We have found it all-important whenever disputes or differences arise to take them up promptly; in fact, we are endeavoring to get the local officials of the Miners' Union and the mine manager to settle differences and disputes among themselves where it is at all possible, because it has been found that all differences and disputes are most readily settled as near their source as possible, and as soon as possible after they arise. Failing in this, the miners are urged to notify their district or State officials without delay, and the operators are also expected to promptly notify their commissioner, for the longer the most trifling differences are allowed to remain unadjusted the more serious they become and the more difficult of settlement; but at the same time both operators and miners are urged, even where the amount of money involved is trifling, to settle only in accordance with every provision and of all the terms of our joint agreements.

It is safe to say that there is really no valid cause for 95 per cent. of these differences and disputes being brought to the attention of the miners' officials and the operators' commission, and very often by the time these differences and disputes reach us we find it necessary to deal with some offense growing out of contentions and bickerings over the most trifling matter. If, by some magic touch, we could burn into the brain of the mine manager "a soft answer turneth away wrath," and into the brain of the miner "a polite request will obtain tenfold more than a rude demand," we would soon be prepared to dispense with much of the tedious work now performed by those entrusted with the difficult task of preserving peace where it is threatened, or restore it where it has been broken. The work before us is, therefore, largely educational—a vast work to be performed by and at the expense of comparatively few men in the coal-producing industry of a single State. It would be idle to endorse the claim that our conditions in Illinois are ideal, but that there is a marked improvement and a hopeful outlook no careful observer can deny.

Of the scores and hundreds of cases that have been brought before the officials of the United Mine Workers of Illinois and the commissioner of the Illinois Coal Operators' Association, all of them, with two or three exceptions, have been settled without appeal. It should be borne in mind that every time a dispute is settled, if nothing more has been done, friction at least is relieved, but the settlement of very many disputes meant the prevention of strikes.

Strikes, even when limited to a single mine and continuing for a short period of time, entail heavy loss on employer and employe. Three hundred dollars' loss per day to the average coal-mining company and its men is a very low estimate. It is impossible to accurately determine the aggregate saving as the result of the Illinois Coal Operators' experiment, but one-quarter million dollars would be a low estimate of what has been saved in the past year to miners and mine owners, and this experiment, conducted at a trifling cost, has not only brought mine owners and miners to a better understanding of each other, but it has brought the mine owners themselves together in a closer union and to a more just appreciation of each other's rights and to a recognition of the importance of organization among the employer class.

For Oil Transportation.

Editor Manufacturers' Record:

I write to you to call attention to this city as a site for the building of tank cars and steel barges for the transportation and distribution of coal oil fom the Beaumont district of Texas.

I find, after a great deal of correspondence, that it is impossible to do anything worth the while except, in rare instances, for the transportation of oil by water. A few barges and carriers adapted to transportation have about all been purchased. The only outlook now for transportation by water is in ordering carriers with their own power of propulsion or adjusting steamers already built for such use. This involves quite a delay, and meantime a hundred or more wells are capped and practically non-productive. The only way I see out of this dilemma is to embark largely at once in new arrangements for building tank cars and steel barges. With orders far ahead, the shortage of tank cars is almost incredible. It will be some amelioration of the latter condition of things if a manufactory of tank cars and steel barges could be inaugurated here. Certainly this is an ideal position or situation for building tank cars to meet the pressing demands of the occasion. I make this suggestion to the presidents of oil companies whose ownership is at Beaumont, that they put some capital into this scheme.

There is a gentleman here who has had a large experience in building machinery of almost all sorts of description, and in this experience has built more or less tank cars and passenger coaches. He is a gentleman of eminent integrity and practicability, and can give references as to business capacity of the most satisfactory character. He has a large foundry with more or less appliances and eligibly situated for doing the work in question. He is ready and anxious to combine with distant capital on a most conservative basis, and to proceed energetically to this work.

It seems to me that in this offer persons conversant with his line of work or capitalists at a distance who are seeking an investment or the presidents of oil companies who are pressed for transportation will find this the most inviting field of enterprise. In surveying the whole outlook for investment and enterprises, I do not know anything that offers such tempting opportunities as the affair in question.

M. B. HILLYARD.

1513 Baronne street, New Orleans.

OIL NOTES.

Facts About Petroleum and Its Uses.

It is thought that the work of laying pipe to connect the Big Sandy oil and gas fields and Charleston, W. Va., will begin in the near future, giving that city an excellent fuel supply.

A dispatch from Galveston, Texas, says that a gusher of oil has been brought in at Keyser Mound, about three miles from Columbia, in Brazoria county, and fifty miles from Galveston.

Representative Cooper of Texas has introduced a bill in Congress permitting

crude and refined petroleum and its products to be carried in vessels owned by foreigners in the coastwise trade of the United States.

A dispatch from Houston mentions a plan which is being discussed to line the Mississippi river from New Orleans to St. Louis with tanks for storing fuel petroleum, which is to be piped into towns and plantations along the route and in the interior.

A Pittsburg dispatch is to the effect that the King Steamship Co. has closed a contract with the J. M. Guffey Company for three vessels to carry oil to Northern ports. The steamships are to be placed in service about April 1, according to the dispatch.

New Plants for Huntsville.

[Special Cor. Manufacturers' Record.]
Huntsville, Ala., January 15.

Mr. T. W. Pratt of this city is now in New York figuring with capitalists for the location of two more large plants here, and negotiations are being conducted by Mr. R. E. Pettus for the erection in this city of several diversified industries, the kind most needed here to help labor.

Several carloads of machinery have arrived for the West Huntsville Cottonseed Oil Mill & Fertilizer Co.'s new plant in the western part of the city. This plant will be completed by the middle of February. Mr. T. W. Pratt is the president of the company.

President R. E. Pettus of the Chamber of Commerce has received a letter from the trunk-line railroad people, in which they state that a construction company is being figured with, and representatives will be in Huntsville in a few days to begin active preparations for the building of the new road.

The Chamber of Commerce is starting out this year with the determination to accomplish the greatest work of any like organization in the South. A campaign for education headed by this organization is being taken up throughout the State by all commercial and industrial associations, who are getting ready to have the next legislature make an appropriation sufficient to pay the expenses of an educational campaign committee to go into the rural districts and work up and thoroughly diffuse an educational interest in conformity with the Pettus educational plan.

New Orleans' Shipbuilding Plans.

Editor Manufacturers' Record:

I have been waiting for some weeks, rather anxiously watching to see where the Gulf Coast Shipbuilding & Dry-Dock Co. would locate its great shipbuilding plant, whether here or at Mobile. At one time, I believe, the determination of the company was to locate its dry-dock here and the shipbuilding plant at Mobile. Then there came, apparently, reconsiderations, revisitings of the committee on location, and a silence that has left one entirely to surmises. Col. S. B. McConnico, the secretary, and one of the vice-presidents of the company, will locate here permanently, and the indications are that the plant will be established here.

It seems that the delay in selection of the site for the shipbuilding plant has been caused by desire to take no risks, and for quite a while an expert has been on the ground examining physical conditions to see if a shipyard could be built, safe from possibility of failure, owing to treacherous banks, whimsical currents, varying depths of water, etc. It has been decided that all difficulties can be obviated by constructing a large basin of sufficient depth inside the bank of the river, and launching the ships therein. This is a novel plan for this country, the first, I believe, on this continent, and, as I understand it, will be recommended as entirely feasible by the expert at a meeting of the company in New York next Friday, 17th instant.

Although no one can know absolutely what the determination of the company may be, I feel morally certain that New Orleans will secure this invaluable accession to its industries. It will really mark an era in our material advancement and benefit this city beyond all forecasts.

M. B. HILLYARD.

New Orleans.

Opportunities at Charleston, W. Va.

The Chamber of Commerce of Charleston, W. Va., has published an interesting pamphlet of nearly 140 pages entitled "The Century Chronicle, Devoted to the Capital City, Its Resources and Natural Advantages." The publication is elaborately illustrated, and carries with it an extension map of the Kanawha and New River coal field in its relation to Charleston as an industrial center. The summary is as follows:

"This pamphlet conclusively shows that but few cities of the country have better natural advantages for a great manufacturing center than Charleston. Under its system of locks and dams the Great Kanawha river is navigable every day in the year, and our railroads are trunk lines, excepting the Charleston, Clendennin & Sutton, which will soon be completed to Sutton and open up direct communication with the Baltimore & Ohio north, west and east. The Chesapeake & Ohio has made definite plans to bridge the Kanawha river at this point and furnish additional facilities for handling freights. The Charleston Traction Co. is now securing right of way to Malden and other suburban points. With abundance of surrounding coal and an inexhaustible supply of natural gas, which is now being sold as low as eight cents per 1000 cubic feet for manufacturing purposes, and which may doubtless be further reduced with a stimulus in that direction, with coke and limestone easily available, there is every reason for predicting success to furnaces and structural-steel plants in this vicinity. Woodworking industries have shown a marked success, and there is still room for more. A number of miscellaneous lines are thriving, and with fire-clay, glass sand, etc., there are many chances open for great industries here.

"The city has grown finely, and the past year has proven that organized effort, through its Chamber of Commerce, has brought definite results in locating the National Veneer Works, inducing the Chesapeake & Ohio to bridge the Kanawha and various other matters of moment; but for the best success it is necessary that this interest increase, and instead of thirty-three members, there should be at least 100 men willing to pull together and foster every movement for the city's general good. What Charleston most needs is numerous diversified factories. Sites can be readily secured, and there is abundance of idle capital to assist any legitimate enterprise which needed funds. Small factories will grow into larger ones, and it is these that make permanent cities."

Industries at Chattanooga.

At the annual meeting last week of the Chamber of Commerce of Chattanooga, Tenn., Mr. N. H. Grady, chairman of the committee on industrial development, reported a most satisfactory growth during the year, especially in the matter of additions and extensions to older plants, stone and brick buildings replacing dilapidated frame structures. A number of new factories were added, the most notable achievement in this direction having been the establishment of a bottle-glass factory, which has brought between 150 and 200 persons to the nearby population; the erection of a cedar slat mill, and of an iron foundry, to which it is expected to add a merchant bar rolling mill, a single-tree factory, boiler shops and woodworking plants.

Study of Ship Canals.

"Great Canals of the World" is the title of a study prepared by the Treasury Bureau of Statistics for publication in the forthcoming volume of the Monthly Summary of Commerce and Finance. It shows the commerce, cost and dimensions of the great canals of the world, especially those connecting great bodies of water, and which may be properly termed ship canals. Ship canals connecting great bodies of water and of sufficient dimensions to accommodate the great modern vessels plying upon such waters are of comparatively recent production and few in number. The one great example of works of this character which has been a sufficient length of time in existence and operation to supply satisfactory data as to cost of mantenance and operation and practical value to the commerce of the world is the Suez canal, and for this the available statistics begin with the year 1870, while its new and enlarged dimensions only date from the year 1896. For the Sault Ste. Marie canal, connecting Lake Superior with Lake Huron, statistics date from 1855, though for the canal in its present form they cover but about four years. Statistics of the Welland canal date from 1867, but for the canal in its present enlarged form cover only two years of operation. The other great ship canals of the world are of much more recent construction, and data regarding their operation, therefore, cover a comparatively brief term, and in some cases are scarcely at present available in detail.

Taught the English.

Mr. J. C. Stewart of St. Louis, of the contractng firm of James Stewart & Co. of that city, has been giving English contractors an example of American methods. He acted as manager in the construction of buildings costing $7,000,000 for the Westinghouse Electric Co. at Manchester. The work was completed within a year, though English builders estimated that it would take five years. It was done by British workmen under American supervision, but instead of the 450 bricks per nine hours a day, which is the English trade-union average, each man laid an average of 1800 bricks, with 2500 on the very plain work. In a cablegram from London Mr. Stewart is quoted as follows in explanation of his feat:

"After that we got to 900 bricks for a man, and by a continuous progress of elimination, guided by the daily reports of progress, we reached an average of 1800. Yes, trouble was threatened from the trades-unions at times, but we met the delegates and defined our position plainly. We were willing to work with union men and every way according to union rules, and we gave eleven pence per thousand, instead of ten pence, which is the rate stipulated by the union. We made it clear as spring water, however, that we were going to have those bricks laid; that we intended to be masters of our own work; that we were not going to let the slowest man on a job set the pace; that each man would have to do his utmost, and that we should have men to see that this idea was carried out. Either we were to run the job, or the unions would be disregarded and other men employed."

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Development in Texas.

The industrial development along the line of the Houston, East & West Texas Railroad during 1901 was remarkable for its extent. The report of Mr. Wm. Doherty, assistant general passenger agent of the company, who has given special attention to the industries, shows that a number of peach orchards have been planted at various points, also a site for a large nursery secured. At Nacogdoches several plants for manufacturing fruit packages have been built, as well as a plant for making pottery. The vitrified brick works at Garrison, Texas, has doubled its capacity, while companies for canning fruit and vegetables have been organized at several different towns. Near Shepherd, in San Jacinto county, the manufacture of cane sugar has been taken up on a large scale. Mr. Doherty reports that a considerable number of immigrants have purchased land along the route, and that the acreage devoted to raising fruit and vegetables has been greatly increased.

To Build in Mississippi.

In addition to the railroad projects in Mississippi recently referred to in the Manufacturers' Record, it is announced that the Nashville & Mississippi Delta Railroad Co. has made arrangements to construct its proposed line immediately. The company has surveyed a route east and west in the State from Grenada, on the Illinois Central, to Nettleton, on the Kansas City, Memphis & Birmingham division of the St. Louis & San Francisco. The estimated length of the line is seventy-five miles, and, according to the statement of Hon. J. W. Buchanan of Memphis, one of the directors of the company, is to be completed by October 1. It is stated that a contract has been let for the section between Grenada and Okolona, and that this work is to begin immediately.

Large Increase in Earnings.

The remarkable increase in earnings of the Seaboard Air Line during five months of last year is shown by a report recently prepared by Messrs. John L. Williams & Sons of Richmond. Messrs. Williams & Sons have been making a computation in which it is shown that the net earnings for the five months ending November 30 show an increase of $794,000 over the corresponding period of the previous year—in fact, more than double the amount thus earned during the previous period. The gross earnings of the system from January 1 to November 30 were $10,430,000, an increase of $1,271,000. The remarkable increase in net earnings indicates the careful and judicious management of the present company.

Brunswick & Birmingham.

The announcement is made that the Brunswick & Birmingham Railroad Co. has formally obtained control of the wharf property at Brunswick for which it has been negotiating. It includes a frontage of several miles on deep water. In connection with the announcement comes the statement that the work of extending the line further north is to be resumed in the near future. President E. C. Machen, it is reported, has interested a number of Northern capitalists in the enterprise, including Mr. Chas. L. Hyde of Tuxedo and Mr. Frank Hyde of Titusville, Pa., president of the Second National Bank of that city.

Columbia's Union Depot.

The union passenger depot at Columbia, S. C., has been completed, and forms one of the most notable improvements which have recently been made in the South. The buildings and approaches cost over $100,000, and were planned by Mr. Frank P. Milburn, official architect of the Southern Railway Co. The main structure is of brick, with granite trimmings and slate roof. The train shelter is of steel, and 540 feet in length, giving ample room to accommodate several passenger trains at one time. The upper portion of the main building will be used for railroad offices.

An Interesting Career.

An interesting sketch of Vice-President A. B. Andrews of the Southern Railway Co. appears in the current number of the Railway Age, in connection with an excellent photograph of this official. He has been connected with railways in the South since 1859. His first position was purchasing agent and general superintendent of the Blue Ridge Railroad. Later he was connected with the Raleigh & Gaston, the Petersburg and the Richmond & Danville. In 1894 he was appointed vice-president of the Southern Railway Co.

Port Arthur Terminals.

A company entitled the Port Arthur Channel & Dock Co. has been chartered in Texas to control the terminals at Port Arthur. It is capitalized at $1,000,000, and the property has been turned over to it by order of the court. The corporation includes several officers of the Kansas City Southern Railway Co., including Stuart R. Knott, its president.

Railroad Notes.

Mr. E. B. Carver of Houston, Texas, represents a syndicate which has purchased the Gulf & Brazos Valley Railroad.

The Norfolk & Western Railroad Co. has given an order to the American Car & Foundry Co. of Huntington, W. Va., for 1000 coal cars. Each will be of forty tons capacity.

The Bristol Belt Railroad and the Bristol Gas & Electric Co. of Bristol, Tenn., has passed into the control of a company of which B. L. Dulaney is president. The company is composed of local capitalists.

The Nashville & Knoxville Railroad Co. has under consideration a proposition for the sale of its line to interests representing the Tennessee Central Company, and a meeting will be held on February 18 to decide the question. The Nashville & Knoxville extends from Lebanon to Monterey, Tenn., a distance of seventy-nine miles.

The meeting to consider the formation of an independent telephone association in the South, in which Mr. S. B. Alexander, Jr., of Charlotte, N. C., is interested, will be held at Charleston, S. C., on March 19, the South Carolina, Interstate & West Indian Exposition Co. having arranged a special telephone day for the exposition.

The Merchants and Manufacturers' Association of Baltimore has elected as officers, president, Lloyd L. Jackson; vice-presidents, William T. Dixon, E. Stanley Gary, John R. Bland and J. Ross Diggs; treasurer, Lawrence B. Kemp.

In 1901 the charter fees received by the secretary of State of South Carolina amounted to $40,583.71, more than four times the amount received in 1900.

During 1901 the receipts of coffee at New Orleans show about 300,000 more bags than in 1900.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

THE COTTON SITUATION.

Review of Recent Developments, with Comments.

Editor Manufacturers' Record:

The crop estimate of Messrs. R. T. Wilson & Co. of New York, which was talked of last week as one of the notable events of the season, was made public here and in Liverpool Monday morning, 13th inst. It was generally assumed by the brokers here that it would be for a small crop, because Messrs. Wilson & Co. had been for several days last week liberal buyers of futures. The estimate, when finally issued, proved somewhat of a surprise, however, as it was for a crop of only 9,445,000 bales, or about 300,000 bales less than it was generally expected it would be. The Liverpool market for futures advanced Monday morning three-sixty-fourths of a penny, presumably on this estimate, but at the close of business had lost all of the improvement except one-sixty-fourth. Our market quickly responded to Liverpool to the extent of ten points, but as very few people here seemed to consider the estimate seriously, the entire advance was lost by about noon, and the general market closed a few points below Saturday's prices.

Mr. Henry Neill of New Orleans still insists that his estimate of 11,250,000 bales will prove to be approximately correct. Between the guesses of Messrs. Wilson & Co. and Mr. Neill there is a difference of about 1,800,000 bales. One will commend itself to the extreme "bulls" and the other to the extreme "bears" on the market, and neither estimate, I think, will be regarded favorably by the conservative element of the trade. The estimates of Messrs. R. T. Wilson & Co. of recent years and the actual results have been as follows:

	Estimate. Bales.	Commercial crop. Bales.
1896-97.....	8,174,000	8,706,000
1897-98.....	10,570,000	11,216,000
1898-99.....	11,533,000	11,256,000
1899-1900.....	8,757,000	9,422,000
1900-1901.....	10,262,000	10,339,000

The statistical position does not favor higher prices for the present or for the near future, as stocks are ample in the chief markets here and abroad, and the receipts of cotton continue on a very liberal scale.

According to the figures of the New York Cotton Exchange, 7,115,000 bales of our crop had come into sight to 10th inst. From the corresponding time to the end of last season there came into sight, according to the New York Chronicle, 3,509,000 bales, and according to the New Orleans Exchange, 3,502,000 bales. The New York Cotton Exchange did not compile the "in-sight figures" for last season. Should the cotton movement hereafter equal that of last season, the commercial crop would, therefore, be somewhat over 10,600,000 bales, averaging about 483 pounds net, against the Department of Agriculture's estimate on December 3 of 9,674,000 bales, averaging 468 pounds net. The fact is not generally known that the Department's crop estimate was based upon the reports to it of the yield of seed-cotton (which contains the seed, which are removed from the lint by the process of ginning), instead of the lint-cotton (or cotton of commerce), as in previous years. No one knows the reason for this radical departure from former methods, except, perhaps, the Secretary of Agriculture, who has declined to discuss the matter in any way with one of the oldest, best-known and most highly respected firms in the cotton trade. With many farmers there is no reason whatever for weighing their seed-cotton, and therefore a great many of the reports sent to the Department must have been mere guesses. The quantity of lint-cotton obtained from 100 pounds of seed-cotton differs with the soil, the weather conditions and the methods of cultivation, but the statistician of the Department undertakes to ascertain correctly the average yield of lint from seed-cotton by some process peculiarly his own. Instead of asking, as heretofore, directly for the yield of cotton, the Department obtains guesses at the yield of seed-cotton, and then the Department itself guesses in Washington at the yield of lint-cotton from the country guesses of the yield of seed-cotton.

There have been many predictions recently that the receipts would soon fall off sharply, but the cotton continues to come forward in liberal volume, and it seems probable that the movement, certainly for several weeks, will be greatly in excess of the receipts for the same period last year. To the 10th inst. 200,000 bales more of our crop had come into sight than to the corresponding time last season. With even a considerably less gain over last year's movement than recently, it seems evident that by the end of January the gain over last season will be quite 400,000 bales, thus indicating a crop of about 10,800,000, should the movement thereafter equal that of last season. The receipts after February 1 last season were comparatively large, and a smaller movement for this season may reasonably be expected, unless the new crop should be unusually early and add materially to the August receipts.

People are making all kinds of explanations of the large receipts except the most natural one—that the yield was greater than many supposed it would be.

While present indications would seem to justify the expectation of a crop of about 10,500,000 bales about four pounds lighter than last season's weights, it does not follow that prices should not improve when receipts finally fall off and stocks diminish. ALFRED B. SHEPPERSON.

New York, January 14.

Makers of Knitting Machinery.

The development of the knitting industry in this country to its present prominent position in the textile manufacturing world has been assisted greatly by the American makers of knitting machinery. Modern knitting machines and their complementary apparatus for producing marketable goods have evolved from crude beginnings, and the American makers of this class of equipment are originators, as they are in so many other lines of industry. One of the oldest, as well as most successful, firms engaged in designing and manufacturing knitting machinery is Messrs. Nye & Tredick of Philadelphia, Pa.

The excellence of Nye & Tredick product has brought into existence a large clientele for it in this country; nor have foreign countries failed to appreciate it, a number of them sending orders from time to time. After a partnership existence of seventeen years the firm has incorporated as the Nye & Tredick Company, and commenced business January 1 with Edward Tredick as president; Geo. E. Nye, secretary, and John C. Brewin, treasurer. These officers have been managing the business for many years, and their abilities will doubtless continue to keep the company prominent in the textile machinery world. The offices remain at 606 Arch street.

The Augusta Canal.

In his annual report Mr. Nisbet Wingfield, commissioner of public works of Augusta, Ga., suggests that 250,000 additional horse-power can be secured from the canal by raising the banks and wasteways from twelve to fifteen inches. He points out that the capacity of the canal is figured on the lowest stage of water in the river, which does not occur more than once or twice a year, and that if the additional power could be sold to consumers willing to take the chance of water falling by reason of severe drouth, the records of the river for the past fifteen years show that the number of times that these mills would be shut down would be exceedingly small.

The Cotton Movement.

In his report for January 10 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the 132 days of the season was 7,083,997 bales, an increase over the same period last year of 203,210 bales; exports were 3,874,365 bales, an increase of 368,056 bales; takings by Northern spinners 1,120,214 bales, a decrease of 82,906 bales; by Southern spinners 746,111 bales, an increase of 99,508 bales.

Textile Notes.

Anchor Mills of Huntersville, N. C., is reported as to double its present plant of 4100 spindles.

S. Kohorn and others of Starkville, Miss., have incorporated the Textile Novelty Co., with capitalization of $10,000.

Raleigh (N. C.) Cotton Mills has declared a dividend of 3 per cent. and re-elected its officers, including C. G. Latta, president.

It is rumored that Tupelo (Miss.) Cotton Mills contemplates doubling its capacity in the spring; now has 5000 spindles and 150 looms.

Meridian (Miss.) Cotton Mills has declared a dividend of 8 per cent. and re-elected its officers, who include Levi Rotherburg, president.

J. O. Kretzschmar of Memphis, Tenn., has purchased the plant of Memphis Lint Co., and will operate same, installing considerable new machinery.

The Chamber of Commerce of Huntsville, Ala., is corresponding with Philadelphia (Pa.) parties relative to the establishment of a rug factory in Huntsville.

Burnett & McKee Company of Vicksburg, Miss., has been chartered, with capital stock of $60,000, for dealing in and manufacturing cotton and otherwise handling the staple.

Messrs. W. W. Gregg, Robert E. Gregg, C. R. Curtis, W. W. Gregg, Jr., and J. V. Gregg of Nashville, Tenn., have incorporated Leeds Woolen Mills Co., with capital stock of $30,000.

B. L. Battle Manufacturing Co. of Warrenton, Ga., will probably rebuild its knitting mill, which was burned last week at a loss of $30,000; however, a definite decision has not been reached.

It is reported that Victor Cromer, Chas. Cromer and Wingert Bros. of Hagerstown, Md., will establish a silk mill, that they have leased building for the purpose, and will install ten looms to start with.

Eagle Cotton Mills, at Lawrenceburg, Tenn., was destroyed by fire last week. It was a 3500-spindle plant, making carpet warps, twine and rope, and employed 125 hands. W. H. Dustin, the owner,

had made considerable improvements during the year.

Harriman (Tenn.) Cotton Mill Co. has put its plant in partial operation, after a shut-down of some months. The entire equipment will be operated as rapidly as possible, experienced hands being scarce. There are 6500 spindles in the mill.

A greater portion of the machinery for Lenoir (N. C.) Cotton Mill has arrived and is being placed in position. At the start 3000 spindles will be operated on fine yarns, and another 3000 spindles are to be purchased later on. Company is capitalized at $75,000.

Lauraglenn Mills of Shelby, N. C., was sold at public auction during the week to John E. Hurst of Baltimore, Md., who was president of the company. The price paid was $4200. It is a 2800-spindle plant for making yarns and ball twine, and was capitalized at $50,000.

Lenoir (N. C.) Cotton Mill has purchased the machinery for its plant, and said equipment is now being placed in position. There will be 6000 spindles for spinning Egyptian cotton, and operations are expected to commence in the near future. Capitalization is $75,000.

Ouachita Cotton Mills of Monroe, La., is nearing completion, and expects to be manufacturing inside of two months. There will be 5000 spindles and 150 looms in position for operation. The company met during the week and re-elected its past year's officers. They include Uriah Millsap, president.

Enfield (N. C.) Knitting Mills has ordered eleven additional knitting machines, with ribbers and loopers to match, and will also install dyeing plant within sixty days. The company has been operating until now ten machines on the production of children's hosiery. Increased production will be 225 dozen daily.

It is reported that Lockhart (S. C.) Mills will build an additional mill in order to provide increased freight traffic for the Lockhart Railroad. This railroad is said to have been guaranteed, when built, a certain quantity of freight annually from the mill, which it has failed to receive. The company now has 25,000 spindles and 800 looms.

The building for the textile school of the North Carolina College of Agriculture and Mechanic Arts at Raleigh is nearing completion. Large quantities of textile machinery have been received, and the installation of it will begin in a few days. The textile school will give thorough courses in carding, spinning, weaving, dyeing and designing.

Eagle Cotton Mills of Lawrenceburg, Tenn., will be rebuilt. The plant was destroyed by fire last week, and its proprietor is W. H. Dustin, who now states that he is in the market for entire new outfit, to include 3000 to 4000 spindles and full complement of power, etc., for manufacturing 4 to 16 yarns. About $50,000 will probably be expended.

Dennis C. Howarth, president of Chester (Pa.) Manufacturing Co., has made a proposition for the purchase of the Memphis (Tenn.) Cotton Mills, a plant of 14,600 spindles and 250 looms. If the transaction is closed, it is claimed that the Chester Manufacturing Co. will remove its plant to Memphis and there consolidate with the purchased mill.

Andrews Loom Harness Co. has purchased the plant and business of the Spartanburg Loom Harness Co. of Spartanburg, S. C., and will continue same. A capital of $30,000 is represented in equipment and facilities for manufacturing loom harness used in textile mills. Messrs. Isaac Andrews and S. Vernon Muckenfuss are the managers.

Bivingville Cotton Mills, reported incorporated recently, should have read the Tyger Cotton Mills, and has capital stock of $100,000. The company is a reorganization of the Fairmont Mills, recently sold at public outcry and purchased by the new company's promoters. The mill at Fairmont, S. C., has 6144 spindles and 176 looms. C. P. Mathewes of Spartanburg, S. C., is president.

Holts' Mills of Fayetteville, N. C., has established a New York office and salesroom at 53 and 55 Worth street. This company is a combination for selling goods direct, and it includes Delgado Mills at Wilmington, N. C.; Holt-Morgan Mills, Holt-Williamson Manufacturing Co. and Tolar, Hart & Holt Mills of Fayetteville, N. C.; Elmira Cotton Mills, Windsor Cotton Mills, Lakeside Mills, Glencoe Mills and Alamance Mills, all of Burlington, N. C.

Anderson (S. C.) Water, Light & Power Co. has let contract to the Flynt Construction Co. of Palmer, Mass., for the reconstruction of its power dam, mentioned last week as having been badly damaged by flood. It has been found that the probable cost of the repairs will be $125,000. In about twelve weeks it is expected that power will again be ready for furnishing the Anderson Cotton Mills, which employed nearly 1300 hands before the disaster.

Anderson (S. C.) Water, Light & Power Co. has arranged for rebuilding that portion of its dam damaged by flood last week, and from $75,000 to $100,000 will be expended for rehabilitating the dam and machinery. The new dam will be forty-four feet high, fifty-five feet wide at base and fifteen feet wide at top. Former size was thirty feet high and eight feet wide. Within four months it is expected that the power plant will be sufficiently replaced to supply Anderson Cotton Mills all the power needed for running its entire plant. Orr Cotton Mills has ordered a steam plant which it hopes to have in position within six weeks, and its 500 operatives will then resume work.

QUOTATIONS OF COTTON YARNS.

By Buckingham & Paulson, New York, Philadelphia and Chicago, January 14.

No. 10s-1 and 12s-1 warps	13¾@14
No. 14s-1 warps	14 @—
No. 16s-1 warps	14½@—
No. 20s-1 warps	15 @15½
No. 22s-1 warps	15½@—
No. 26s-1 warps	15¾@16
No. 6s to 10s bunch yarn	13 @13½
No. 12s-1	13¾@14
No. 14s-1	14 @—
No. 16s-1	14 @14¼
No. 20s-1	15 @15½
No. 22s-1	15½@—
No. 26s-1	15½@16
No. 8s-2 ply soft yarn	14 @—
No. 10s-2 ply soft yarn	14½@—
No. 8s-2 ply hard	13½@13¾
No. 10s-2 ply hard	13¾@14
No. 12s-2 ply hard	14 @—
No. 14s-2 ply	14 @—
No. 16s-2 ply	15 @—
No. 20s-2 ply	15½@—
No. 24s-2 ply	16½@—
No. 26s-2 ply	16½@—
No. 30s-2 ply yarn	17½@18
No. 40s-2 ply	22 @22½
No. 8s-3, 4 and 5 ply	13½@—
No. 20s-2 ply chain warps	15½@—
No. 24s-2 ply chain warps	17 @—
No. 26s-2 ply chain warps	17 @—
No. 30s-2 ply chain warps	17½@18
No. 16s-3 ply hard twist	15 @—
No. 20s-3 ply hard twist	15½@—
No. 26s-3 ply hard twist	16½@—

Market quiet.

The Richmond (Va.) Chamber of Commerce has elected Mr. H. L. Cabell, president; Mr. E. G. Leigh, Jr., and Mr. James R. Gordon, vice-presidents; Mr. John H. Montague, treasurer, and Mr. R. A. Dunlop, secretary.

Louisiana planters in session at New Orleans have adopted a strong protest against the free entry of Cuban sugar into this country.

It is announced that Canadian iron has been shipped to Glasgow, cast into large pipes there and shipped back to the Dominion.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., January 15.

The business in phosphate rock has been only moderate during the week, and fertilizer men are not buying in large lots. It is yet too early in the year to predict the course of trade, but the conditions at present are said to be favorable for considerable business during the present year. From points of production in the South reports are favorable for a fair business during the year, and in South Carolina miners are working their plants to good advantage. Prices of rock are generally steady, and there is a better foreign demand, while the local inquiry has improved during this month. Miners in Florida are generally prepared for the work of the year, and are cautious in their movements, scaling the output to meet the current demand. In the pebble section several plants are only working one-third or one-half time. There is, however, a better foreign demand, both for pebble and hard rock, and shipments are likely to increase in February. The total shipments in 1901 from the Florida ports alone were as follows: Fernandina, 183,409 tons; Tampa, 313,167 tons; Punta Gorda, 46,822 tons; Savannah, 163,385 tons, and Brunswick, 31,884 tons—or a total of 738,667 tons, of which 540,018 tons were foreign and 198,649 tons domestic. The phosphate market in Tennessee has been moderately active, and the outlook for 1902 is considered encouraging. There is already some foreign inquiry, and also a demand from interior domestic markets. Prices are generally very steady, and are likely to be well maintained.

Fertilizer Ingredients.

The business in ammoniates during the week has been of a fairly active character, and the demand steady without showing any increased expansion. Southern buyers have been in the market, and there is some demand from Eastern sections. Stocks in the West are said to be large, but the actual output is difficult to arrive at. Western holders are, however, firm in their views.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)	$2 77½@ 2 80
Nitrate of soda, spot Balto	1 90 @ 1 92½
Blood	2 27½@ 2 30
Azotine (beef)	2 30 @ —
Azotine (pork)	2 30 @ —
Tankage (concentrated)	2 17½@ 2 20
Tankage (9 and 20)	2 25 & 10@ 2 30 & 10
Tankage (7 and 30)	21 00 @22 00
Fish (dry)	26 00 @27 00

Phosphate and Fertilizer Notes.

The Dominion Phosphate Co. of Bartow, Polk county, Florida, has been chartered, with a capital stock of $90,000. The incorporators are A. D. Wright, C. S. Ross and David Tisdale.

The record of the year from December 1, 1900, to November 30, 1901, in the phosphate industry of South Carolina is given as follows: Estimated tons mined, 82,656; actual tons shipped, 90,740; royalty, at 25 cents per ton, $25,120.56; total rock on hand November 30, 1901, 61,845 tons.

It is stated that the Federal Chemical Co. of Louisville, Ky., has closed a deal for the land in West Nashville, Tenn., on which to erect a fertilizer plant costing about $200,000. All of the land purchased will be utilized, and the plant will employ when in operation from 300 to 400 men.

It is reported that the plant of the Peace River Phosphate Mining Co. at Hull, Fla., was destroyed by fire on the 10th inst. The loss is estimated at $100,000; insurance, $50,000. The plant was located in De Soto county, not far from Arcadia, and the output of the mines was over 100,000 tons annually. The mines are said to be the largest river pebble phosphate mines in Florida.

Cottonseed-Oil Notes.

It is stated that the organizers of the cottonseed-oil mill at Vernon, Texas, have secured the entire stock of $50,000. Work will commence at once.

At Dallas, Texas, on the 9th inst. sales of cottonseed products were made at advanced prices. January-February oil sold for 36 to 37 cents, while a few sales for March shipment were reported at 38 cents. Prime summer yellow moved freely at 40 cents. Mills were said to be well sold up in all products. Meal and cake were weak at $22.50 f. o. b. Galveston. Linters were firm at 2⅜ cents. At Houston, Texas, on the 10th inst. there was an advance of ½c. to 1c. in cottonseed oil, with prospects of an advance on all cottonseed products.

The following are the official quotations of cottonseed and cottonseed products as posted at the New Orleans Cotton Exchange on the 13th inst.: Prime refined oil in barrels, per gallon, 42½ cents; off refined oil in barrels, per gallon, 41½ cents; prime crude oil, loose, per gallon, 36½ cents; prime cottonseed cake, per ton of 2240 pounds, $28.75; prime cottonseed meal, per ton of 2240 pounds, $28.25; soap stock, per pound, 1.10 cents; linters, A, per pound, 3¼ cents; B, 2¾ cents; C, 2¼ cents; cottonseed in sacks delivered at New Orleans, per ton of 2000 pounds, $15; in bulk delivered at New Orleans, per ton of 2000 pounds, $14.

To Operate in the South.

A corporation to be known as the Trust Company of the Republic, and to have a capital of $1,000,000, is in process of formation in New York, and D. Leroy Desser, president of the Merchants' Exchange, who will be connected with it, is quoted as stating that the company proposes to offer particular accommodation to borrowers on cotton and cotton-mill products, rice, sugar, pig-iron and iron ores, upon the basis of storage warehouse certificates, and that the first field to be covered in the building of warehouses will be the cotton belt. Among those who have been decided upon for directors are Perry Belmont, Stuyvesant Fish, president of the Illinois Central Railroad Co.; Henry C. Rouse, president of the Missouri, Kansas & Texas Railway; Charles A. Peabody, Jr., Samuel A. Colt, president of the Industrial Trust Co.; Thomas F. Goodrich, vice-president National Surety Co.; D. Leroy Desser, Ballard McCall, secretary and director National Surety Co.; James McMahon, president Emigrant Industrial Savings Bank; W. D. Baldwin, president Otis Elevator Co.; Thomas E. Crimmins, Charles D. Marvin of A. M. Kidder & Co., bankers; Charles W. Wetmore, president North American Company; Herbert Leroy Satterlee, general counsel for the Missouri, Kansas & Texas Railway; Claude W. Jester, Alex. Greig, president and secretary Warehouse Company, and vice-president National Surety Co.; Chas. F. Brooker, president of the American Brass Co., and John M. Parker, president of the Union National Bank of New Orleans.

The demand for coal in the New England market has reached such proportions that recently fifty sailing vessels and barges were in Baltimore harbor at one time awaiting cargoes of fuel. Owing to the scarcity of rolling stock, but a small tonnage of coal is being received from the mines of Maryland and West Virginia.

MECHANICAL.

Picks That Last.

One of the industries which has done much to give Chicago such a reputation is the manufacture of mill picks. The firm of John C. Higgins & Son has manufactured these tools for thirty-seven years and has made them famous throughout the world. It can be said, however, that their fame is thoroughly deserved, as they are manufactured of the best quality of steel made especially for the purpose, and by careful and competent workmen.

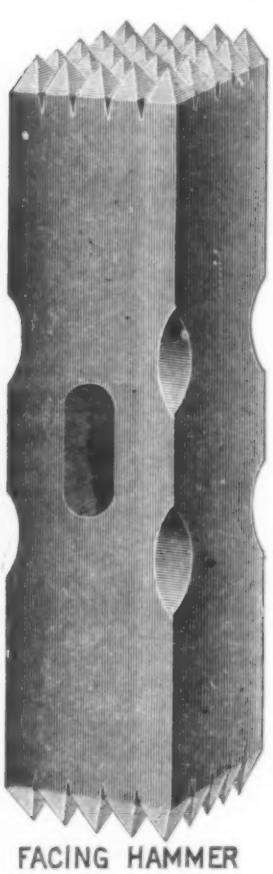
FURROWING OR EYE PICK

FACING OR CRACKING PICK WITHOUT EYE

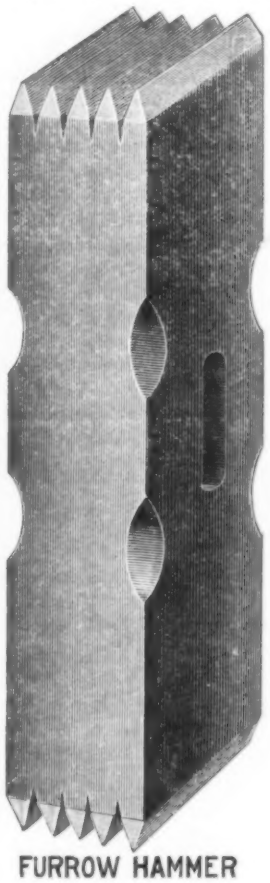
PATENT SOCKET MILL PICK HANDLE
for use with Picks without eyes

All those who use picks well know there is much in the tempering and hardening of the steel. It may be said that these are features of the Higgins' work. The picks exhibited at the International Exposition in Australia won for the manufacturers a gold medal and diplomas partly on this account, the judge stating that the samples submitted were of "excellent quality, well made and tempered, and deserving of the special first order of merit."

The designs illustrated have become extremely popular with all who use them. They include the furrowing or eye pick and the facing or cracking pick without the eye. Two other specialties are the Higgins facing and furrow hammers. Anyone requiring this grade of tools, and desiring a superior article, can secure additional information by addressing the manufacturers, John C. Higgins & Son, No. 165 West Kinzie street, Chicago.



FACING HAMMER



FURROW HAMMER

To Utilize Wood Wastes.

In a letter to the Manufacturers' Record Mr. R. G. Ewer, a mechanical engineer, of 245 Broadway, New York, calls attention to a subject which ought to interest owners of pine territory from which the standing timber has been removed, and where there is still lying waste to the value, as Mr. Ewer estimates, of thousands of dollars. He writes:

"In this great country of ours we have not learned to use to the best advantage the wastes that occur in various industrial operations. Our neighbors, the Germans, are and have been doing this for a long time. In many of their operations the by-product is often of a greater value than the material for which the plant was built or the process designed. As we grow older as a nation, and our vast supplies of raw material begin to diminish, we will feel obliged to pay greater attention to the wastes than we are now doing. It is a pleasing fact that our institutions of learning have recognized the necessity of making special effort to teach the rising generation the necessity for caring for the standing timber, as well as planting anew to supply the loss caused by the great demand on our forests by home consumption and export trade.

"I am informed that the whole output from the enormous lumber mill at Orange, Texas, amounting to millions of feet yearly, is sent abroad, with no available use except for fuel for the waste, such as sawdust, slabs, etc. One scarcely realizes what this waste means. There are thousands upon thousands of cords of this pine waste in Texas, Louisiana, Mississippi, Alabama, Georgia and the Carolinas. Each cord of this waste pine contains about eight gallons of turpentine, a gallon of wood alcohol, a barrel of tar and more than 500 pounds of the best quality of charcoal, aggregating in value, say, $14, while the cost of obtaining these products would not exceed $10, a profit of 40 per cent. above the cost of production.

"A plant necessary for the treatment of this waste would cost not to exceed $15 per cord of wood so treated yearly. A profit of $4 per cord, with a cost of plant not to exceed $15, means a dividend of 26 per cent. on the investment, and the wonder is that it has not been developed before. I say developed, as many attempts have been made to distill wood in the ordinary way for all its various products without success until of recent date. That it can be distilled with appliances properly arranged for it is beyond question, and the product would be of a quality equal to anything in the market. It is a large field, and should be taken advantage of as an investment giving good returns."

Superior Pump Valve.

The life of an ordinary rubber pump valve depends largely upon the quality of the rubber used in manufacture. If a poor quality of rubber is used, the valve will chip off, crack or press down through the seat under a pressure of sixty pounds per square inch and over. The recent rise in the price of rubber has made the cost of good pump valves expensive, and this has naturally led to the invention of the Armord pump valve, which is designed to minimize the amount of rubber used per valve, and supply strength in a metal plate or disk through which is molded a rubber margin. By this means it is claimed that a thin valve is given the full strength of a thick valve made of hard rubber. Because of the small amount of rubber necessary for each valve, the highest quality may be used at a much lower cost than would be necessary if the valve were made altogether of rubber of the same quality. An additional advantage is derived from the metal bearing which the disk provides for the spring, as well as the length of spring allowable for the same size valve-guard. As this valve rests exclusively on the seat without having any bearing on the radial ribs, it closes tightly and does not leak, while it gives less opportunity for foreign matter to lodge underneath and hold the valve up.

ARMORD PUMP VALVE.

These valves are made by stamping a metal disk out of steel, which is then plated with copper to preserve the surface and secure the adhesion of the rubber. Marginal holes or notches are left on the inside and outside edges of the plate, and rubber is molded around these, as shown by the cut, and then vulcanized to the required hardness. When desired a brass or bronze plate is used for the body instead of steel, and the plates are sometimes corrugated radially to increase their stiffness when the area of the valve is large. The high grade of rubber used in these valves insures their great durability, and the design is such that they may be used for very heavy pressure.

The Power Specialty Co., 126 Liberty street, New York, which is the sole manufacturer of the Armord patent pump valve, will be pleased to give further particulars.

New Catalogue Cabinet.

The J. D. Warren Manufacturing Co. of Chicago has completed two designs of catalogue cabinets. Many merchants are desirous of saving valuable printed matter, which frequently is discarded for the want of a suitable place to keep it for quick reference.

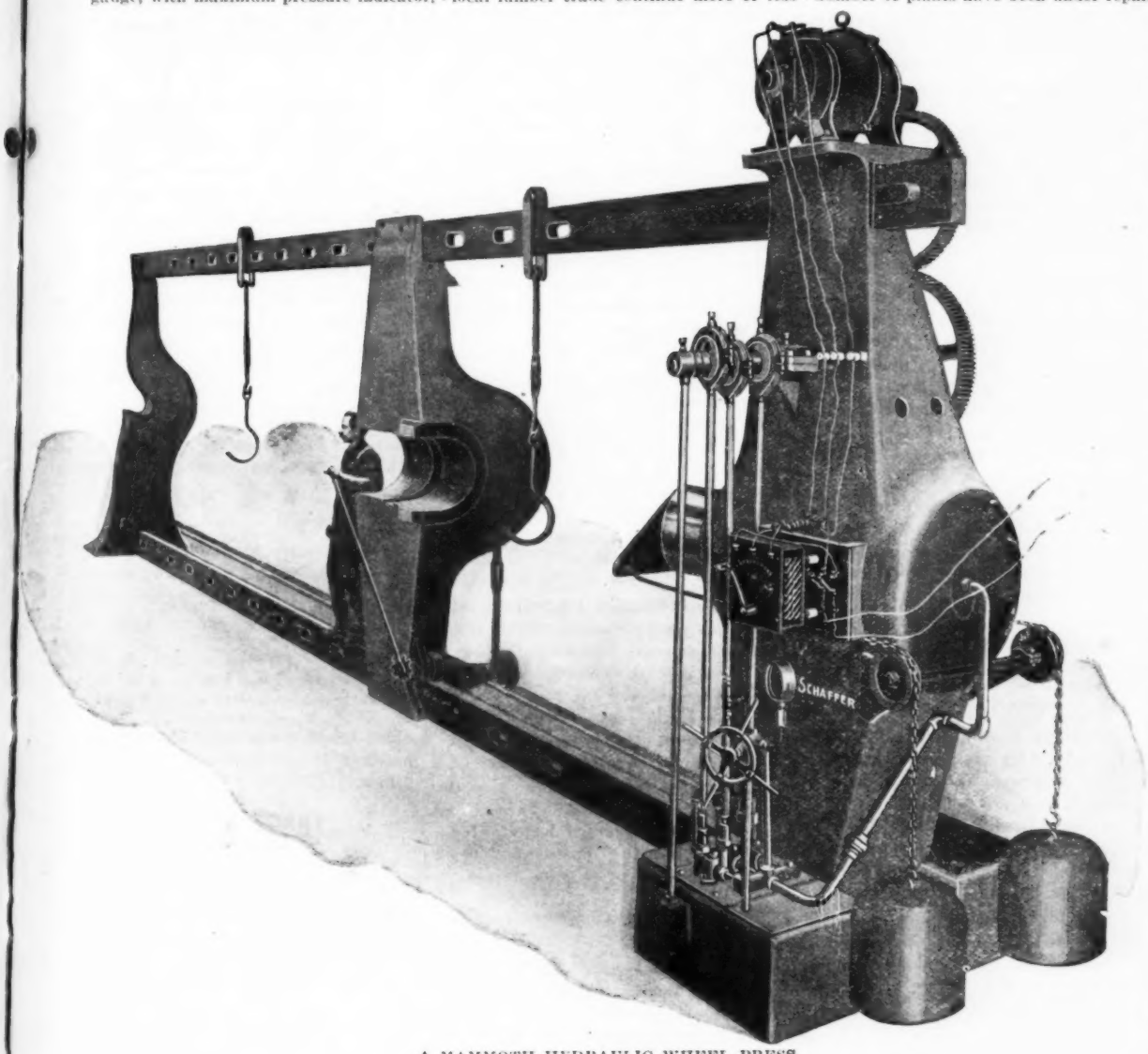
After considerable study of the problem, a cabinet was adopted that responds in a most practical way to the daily demands for information, through its variety of arrangement. The various designs contain the best points that have been embodied in the various cabinets the Warren Company has made. They are attractive in appearance and form a very desirable addition to office furniture.

NEW CATALOGUE CABINET.

Mammoth Hydraulic Wheel Press.

The apparatus depicted in the accompanying illustration has been the subject of much interest among machinists who have heard of it. The J. T. Schaffer Manufacturing Co. of Rochester, N. Y., the maker, claims it is the largest hydraulic wheel press ever built, and takes a pardonable pride in the fact.

The press was built for a Western engine-building company, and is 120 inches between tie bars, and will take in a shaft thirty feet between face of ram and face of yoke. It has a capacity of 500 tons pressure and was tested to 600 tons. Tension bars are of steel, keys of steel, yoke and ram are faced with steel, yoke has ball bearings. It is equipped with automatic stops for regulating large pumps, safety-valve and lock-up pressure gauge, with maximum pressure indicator.



A MAMMOTH HYDRAULIC WHEEL PRESS.

The triple pumps are driven by electric motor. The cylinder was cast by a patent method by which the iron is freed from all blow-holes and spongy parts, giving a perfect and strong casting.

The Schaffer Manufacturing Co. makes a specialty of hydraulic presses and builds a full line of wheel, platen and crank-pin presses. It has been in the business since 1869 and has made a special study of this class of work.

Consul-General Andrew G. Barlow at the City of Mexico has been directed by the United States Department of State to prepare a report in regard to American enterprises in Mexico, giving the names of companies, firms or individuals, the business in which they are engaged, the capital employed in each, and other information, which will be treated by Mr. Barlow as strictly confidential.

The past year has been financially the most prosperous in the history of the Memphis Cotton Exchange, and it began this year with a balance of more than $1800. Memphis handled 6.51 per cent. of the total cotton crop of last season.

The value of the mineral products of the United States in 1900 was $1,067,603,606, a gain over 1899 of $95,702,712.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., January 15.

The general conditions surrounding the local lumber trade continue more or less encouraging to those engaged in the industry. Receipts of lumber during the week by water have been light, owing to the inclemency of the weather in the bay. The demand for lumber is better today than the same date a year ago. In all commercial woods there is a better feeling, and in white pine especially holders are very firm in their demands, and refuse to sell except at outside figures. White-pine men seem to be very confident that the market will continue to show a strong tone during the present year. The situation in North Carolina pine improves as the season passes, and the demand is quite decided at the moment. Several large contracts have been made with New York firms for the output of certain mills in the North Carolina pine belt, and Northern buyers are especially anxious to get their orders filled for prompt delivery at ruling rates. Even higher figures have been offered for several round lots during the week for future delivery. Stocks continue of moderate proportions, and with favorable weather for logging mills are expected to increase their output to meet present contracts. The tone in hardwoods is improving, and values for oak, ash and other woods are steady, with stocks of dry lumber moderate. The foreign export business is still unsettled, depending entirely upon conditions in the markets of Great Britain and the Continent, which at the moment are not of an encouraging character.

Savannah.

[From our own Correspondent.]
Savannah, Ga., January 13.

The week under review has been rather quiet in lumber circles, and lumbermen have not yet fairly started on the new year's business. In milling sections a number of plants have been under repair, and nearly all will resume work this week, so that considerable activity is likely to set in in many of the departments of the industry. Shipments of lumber in 1901 were particularly good, and the shipments for the year are estimated at about 125,000,000 feet. The outlook for heavy shipments of lumber during the present year is very promising, on account of the extensive freight facilities provided by the new line of steamers and a free offering of sailing vessels. A rapid and steady improvement is being made in the Savannah river between Savannah and Augusta, and the deepening of the channel will improve the volume of river business. At Brunswick the new year has opened with considerable activity in all lines of the lumber trade. The foreign demand for lumber and crossties is especially good. A steamer with 25,000 crossties has cleared for Cuba, and a shipment of 900,000 feet of lumber to Spain. Brunswick has always enjoyed a good foreign trade, and before the Spanish-American troubles Spain was the heaviest buyer. This trade is steadily returning, and the outlook at present is good for a return of that country's patronage. At Darien there is also quite a good foreign demand for timber and lumber, and the business of that port is of a very substantial character. In the freight market rates from all Georgia ports are very steady. A number of vessels are chartered to load crossties at Brunswick for New York, among them the schooners Adelaide Barber, 1171 tons; Marjory Brown, 1061 tons, at 14 cents, and bridge ties at 15 cents; schooner F. & T. Lupton, 797 tons, Brunswick to Baltimore with ties at 14 cents if 100,000 a day, 13½ if 150,000 a day, and schooner Florence Leland, 284 tons, from Savannah to New York or Bridgeport with lumber on private terms.

Norfolk.

[From our own Correspondent.]
Norfolk, Va., January 13.

Business has fairly commenced for the new year, and in all milling sections the various plants have now a fair supply of orders. The activity in North Carolina pine is most pronounced; the outlook for the present year is encouraging alike to dealers and manufacturers. Prices throughout the general list are very steady, and buyers are generally anxious to get their orders promptly filled at ruling rates. Stocks of lumber are not accumulating to any extent, and, in fact, are rather badly assorted in some cases. The planing mills are generally working on full time, and dressed lumber is active and firm, all the mills being well supplied with orders. There is a good demand for cypress and cedar shingles, and the output of pine shingles is good. The local demand for lumber is still active, and large quantities are going into consumption for building purposes. The export demand for lumber is still only moderate, but dealers generally look for a better trade later on. Several prominent companies are preparing shipments for European ports, while more inquiries from foreign sources are being received. Among the improvements in milling plants, the Surry Lumber Co. contemplates making some extensive changes in its plant at Dendron, which will materially increase its capacity. Lumber freights continue steady, with rates unchanged and a fair offering of desirable tonnage.

Mobile.

[From our own Correspondent.]
Mobile, Ala., January 13.

The volume of business in nearly all channels of the lumber and timber market continues to show but little expansion; the business, however, is of moderate character, and both in timber and lumber shipments continue to go forward to the usual markets. The domestic demand for lumber is fair, but the foreign trade, especially with German ports, is quiet, and the prospect for prime lumber not too encouraging. Considerable shipments to Cuba and South America are reported, and there is also some inquiry from Northern ports. Stocks of lumber at milling points are accumulating, and unless the output is curtailed prices cannot be maintained. In lumber circles last week nearly 2,000,000 feet left the port, half of which went to South America. A scarcity of logs exists at present, and some mills are running half-time. Sawn timber is held very firm by the Sawn Timber Manufacturers' Association at 15 cents, and stocks are about equal to shipments. Last week 120,220 cubic feet were shipped, of which 24,585 cubic feet went to Queenstown, 100,260 to Manchester and 4375 to Dordrecht. There is a good demand for logs; pine saw logs are steady at $6 to $9 per 1000; cypress logs, 8½ to 16 cents per cubic foot; poplar, $6 to $8 per 1000 feet; oak, $8 to $12, and cottonwood, $4 to $5 per 1000 feet. At Pensacola the late rains has caused considerable of a rise in the upper rivers, and stocks of timber at Ferry Pass have increased to over 30,000 pieces. In re-

gard to ocean freights on timber Messrs. Fred O. Howe & Co. say: "Pitch-pine freights continue dull, with little or no advance on last quotations. Rates by sail for U. K. or Continent are 95s. to 100s., according to size and port; for Mediterranean, 90s. to 92s. 6d. For South America we quote $11.50 to $12, Buenos Ayres or Montevideo; $13 Rosario, and $12.50 Rio, on clean form, proportionately more on $2 form. Steam freights are quiet, 85s. being obtainable for large vessels, option two ports discharging; for smaller tonnage we quote 87s. 6d. to 90s., according to port and loading." The following charters were reported in the open market last week: Schooner John F. Kranz, 487 tons, from Pensacola to New York with dry cypress at $6.25; schooner Preference, 243 tons, from Mobile to Havana with lumber at $5.50; German steamer Marie, 891 tons, from Pensacola to the Continent with timber at 90/, and German steamer Claudius, 2270 tons, from the Gulf to the Continent or United Kingdom with timber at 87/6.

Lumber Notes.

The Norfolk Hardwood Co. of Norfolk, Va., has increased its capital stock from $5000 to $10,000.

The Coleman Lumber Co. of Asheville, N. C., was chartered last week, with a capital stock of $6000.

The port of Carabelle, Fla., for the year 1901 shows a volume of business in lumber and naval stores amounting to $358,000.

The Arentz Lumber Co. of New Decatur, Ala., is preparing to add a fine veneering plant to its mill, and will also add improvements to its saw and planing mill, all amounting to about $10,000.

The big lumber plant of the James Strong Lumber Co. at Bristol, Va., is finished, and is ready to be put in operation. The plant has a daily capacity of 100,000 feet, and will cut not far from that amount.

The Norwegian bark Murter was towed up the Pascagoula river to be loaded with lumber at the Robinson Land & Lumber Co.'s mills. She will carry, when loaded, 900,000 feet of lumber, and is the largest vessel that ever ascended the Pascagoula river.

The International Creosoting & Construction Co. of Galveston, Texas, has been chartered, with a capital stock of $300,000. The incorporators are T. W. English, N. H. Ricker, J. W. Byrnes, G. B. Miller and James B. Stubbs, all of Galveston.

The lumber and planing mills of Otis & Whitmire, located on the Big Escambia at Mulat, Fla., were totally destroyed by fire on the 7th inst. The output of these mills was controlled by Baars, Dunwoody & Co. of Pensacola; insurance, if any, not known.

The steamship Apache of the Clyde Line cleared from Jacksonville, Fla., last week for New York with 150,000 feet of lumber, 5000 bundles of shingles and other cargo, and the schooner Julia A. Turkee for New York with 325,000 feet of lumber.

One of the largest logs ever cut in the section near Bloomington, Md., by the Meadow Mountain Lumber Co. was cut last week. This poplar log measured fourteen feet, and scaled 3000 feet of lumber. The diameter of the log was seven feet.

The following vessels cleared last week from Charleston, S. C., with lumber: Schooners Passadena for New York with 468,000 feet; James D. Dewell for Elizabethport, N. J., with 480,000 feet, and John H. May for Philadelphia with 360,000 feet. The steamship Navahoe cleared for Boston with 151,440 feet of lumber among her cargo.

The shipments of lumber from the port of Mobile last week amounted to 1,868,655 feet, and for the season 31,108,900 feet, against 33,790,673 feet last year. The shipments of sawn timber last week were 129,230 cubic feet, and of hewn timber 35,753 cubic feet.

A meeting of lumbermen of South Carolina was held last week at Columbia. Several matters relating to the industry were discussed. A State organization was formed, with A. G. Gower of Greenville, president, and W. B. Dozier, secretary and treasurer.

The Bagdad Sash Factory Co. of Bagdad, Fla., whose mill was destroyed by fire several weeks ago, has its new mill building completed, and the machinery for its equipment will shortly be placed. The company expects to commence operations about March 1.

Two dry-kilns of the plant of the Angola Lumber Co., situated on Cape Fear river, in the northern part of the city of Wilmington, N. C., were destroyed by fire on the 8th inst. In the kilns were over 150,000 feet of lumber, all of which was more or less damaged. The loss is estimated at over $5000, almost wholly covered by insurance.

The large saw-mill of the Shulte Hardwood Lumber Co. of Glendora, Miss., was completely destroyed by fire on the 8th inst. No estimate of the loss is given, but it is said it will be fully covered by insurance. The plant was owned by an Indiana company, and had a capacity of 30,000 feet daily. Edward M. Shulte of Evansville, Ind., is president of the company.

The Sen La Woodworking Co. of Durham, N. C., with an authorized capital of $10,000, was organized in that city last week. The new company absorbs the woodworking concern of Paul Wheeler & Co., and it is stated the factory will be greatly enlarged and many improvements made. Back of the concern are J. S. Carr, Jr., W. J. Griswold, S. M. Wheeler and others.

The stockholders of the White Furniture Co. of Mebane, N. C., have decided to increase the capital stock of the company to $100,000, with privilege of increasing later to $250,000. The company has also decided to build an addition to the factory 75x118 feet, three stories high, and put in a 250-horse-power Corliss engine. Other improvements in the way of machinery are also in contemplation.

The Carolina Contracting Co. of Columbia, S. C., at its meeting last week declared a dividend of 30 per cent. The plant of this company is being constantly enlarged and improved, and is now second to none in the State. The company does not confine itself to the manufacture of pine, but is prepared to furnish oak and other hardwood finished goods. John P. Thomas is president, and Samuel Stone is the manager.

The Southern Naval Stores Co. held its second annual meeting in Savannah last week, at which the old board of officers were re-elected: W. C. Powell, president; B. H. Bullard, first vice-president; W. W. Beach of Waycross, second vice-president, and R. B. Powell, secretary and treasurer. The report showed the company's business for the past year to be very satisfactory, and a dividend of 10 per cent. was declared.

The Southern Tight Stave Manufacturers' Association met in Memphis on the 9th inst., with a full attendance. The meeting was behind closed doors. Reports from the president and secretary were read, and a general discussion of trade matters entered into. It is said that no change was made in the price-list. The officers elected for the ensuing year were as follows: George W. Decker of St. Louis, president; M. V. Colcutt of Dyersburg, vice-president, and E. H. Defebaugh of Louisville, secretary.

The lumber interests of J. J. Cummings of Savannah, Ga., have been sold to the Chattahoochee Lumber Co. The deal was ratified at a meeting of the directors held in Savannah last week. Mr. Cummings has been engaged in the export business, and the transfer of his interests means that the Chattahoochee Company will continue the business, besides operating its mills. This company is capitalized at $160,000, and has extensive holdings throughout the State. The following officers were elected at the meeting: L. McNeill, president; J. J. Cummings, vice-president; T. C. Wilson, secretary and treasurer; C. I. Cummings, director of mills, and W. L. Powell, director of woods. The headquarters of the company will be in Savannah.

An increase of almost 191 per cent. in the capital invested in the turpentine and rosin industry and of 152 per cent. in the value of the products therefrom is shown in the census report issued last week from Washington, D. C., on the manufacture of these products in the United States. The total value of turpentine and rosin products consists of $14,960,235, the value of 754,670 barrels of spirits of turpentine; $5,129,208, the value of 2,563,087 barrels of rosin, and $255,354, the value of miscellaneous products, such as tar, pitch, rosin, oil, charcoal, refined tar, etc. From the distillation of 4,033,153 barrels of crude turpentine by the 1503 establishments exporting, there resulted 24 per cent. of spirits of turpentine, 55 of rosin and 21 per cent. of other products. The consumption of spirits of turpentine in the United States is 20,397,588 gallons, or 53 per cent. of the quantity manufactured, and of rosin 193,969 barrels, or 7.6 per cent. The amount of crude turpentine (barrels) gathered and total value by States follows: Alabama 373,005, value $2,033,705; Florida 1,212,935, value $6,469,605; Georgia 1,515,569, value $8,110,468; Louisiana 20,299, value $115,324; Mississippi 359,529, value $1,772,435; North Carolina 361,729, value $1,055,695; South Carolina 190,095, value $787,656.

Mardi Gras at New Orleans.

New Orleans has already entered upon the preliminary festivities of its Mardi Gras celebration, which annually attracts so many persons to that city.

With the ball of the Atlantians on February 4, Mardi Gras festivities really commence, and from that date until the wind-up, on the 11th, the city will be filled with fun-loving, sight-seeing visitors and the hotels and boarding-houses packed to overflowing.

On Thursday, February 6, the Knights of Momus will give their usual grand night pageant, parade, tableaux and ball. It is one of the old organizations, and the street parade is always equal to and as attractive as any. On Monday, the 10th, Rex will make his customary yearly official entry into the city, escorted up the river by the fleet and through the streets by the military and civic organizations.

Monday night Proteus will turn out in gorgeous night display, followed by tableaux and ball. Tuesday, the closing day of the feasting and fun, will have Rex and his grand day parade and night tableaux and ball at the Washington Artillery Hall, while dearly beloved old Comus, the mysterious, will dazzle and astonish visiting strangers by his brilliant and always select and amusing street parade and display, winding up the Carnival of 1902 at the French Opera House.

At the annual meeting of the American Statistical Association at Boston on January 17 Dr. E. M. Hartwell will read a paper on election statistics in Massachusetts as illustrated by votes on constitutional amendments and referenda, and Mr. Frederic H. Fay will describe the method employed in determining the growth of the city of Boston. Hon. Carroll D. Wright is president of the association, and Dr. Davis R. Dewey is secretary.

It is announced that the Old Dominion Steamship Co. has decided to construct another vessel for the route between New York and points on Hampton Roads. It is believed that the Newport News Shipbuilding & Dry-Dock Co. will secure the contract, as it has submitted the lowest bid for the work.

The Georgia-Carolina Navigation Co. is being organized at Savannah to operate a steamboat line between Savannah and Bluffton. The company proposes placing two steamboats on the route.

The sales in the Joplin (Mo.) district during the week ended January 11 were 9,873,210 pounds of zinc ore and 1,383,290 pounds of lead ore, valued in all at $161,872.

The Chamber of Commerce of Chattanooga, Tenn., has elected Messrs. Newell Sanders, president; E. F. Sevier, treasurer, and B. L. Goulding, secretary.

The total assessed valuation of property in the counties of Florida is $97,561,048, an increase over 1900 of $874,094.

Mr. Julius Runge has been re-elected president of the Galveston Cotton Exchange.

TRADE NOTES.

To Woodworkers.—In another column will be found the announcement of the sale of woodworking machinery at St. Augustine, Fla., consisting of an engine, planer, joiner and other apparatus. G. T. Bunting may be addressed.

Duplicated the Order.—The Lake Erie Iron Works, Cleveland, Ohio, has recently added to its electric plant a 160-horse-power engine built by the Ball Engine Co., Erie, Pa., and direct-connected to a General Electric Co. generator. This is a duplicate of a unit installed a year ago.

Orders for Rolling Stock.—In addition to recent orders secured by Mr. F. M. Hicks of the Hicks Locomotive and Car Works of Chicago for the McCloud River Railroad Co., the company has placed another order for sixty flat cars to be delivered at once. The Vera Cruz & Pacific Railroad Co. has also placed an additional order for two locomotives for immediate delivery.

Raising Live-Stock.—Elsewhere in this issue will be found an advertisement describing an opportunity to engage in the raising of live-stock in one of the most attractive parts of the South. J. Burruss McGehee of Laurel Hill, La., offers his stock farm for lease for a term of years, with a quantity of high-grade cattle, horses and mules. The farm is also provided with improved machinery. The live-stock and grain crops will be sold at a sacrifice.

Truly a Standard.—Several years ago the Lufkin Rule Co. of Saginaw, Mich., made a measuring tape of steel, which is probably carried in the pockets of nearly every surveyor in this country. When it is considered that the metal from which the tape is manufactured is extremely sensitive to the weather, and that great care has to be taken in tempering it properly to avoid expansion and contraction, the uniform accuracy of these measures is really remarkable. They have been tested many times by the government, but the discrepancy between them and the standard measures is so small as to be practically nothing; in fact, the Lufkin Company feels warranted in giving a guarantee of accuracy for its measuring tape.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Birmingham — Improvements. — Birmingham Railway, Light & Power Co. will expend $1,500,000 in betterments, which include doubling capacity of power-house, enlarging gas works, extending and improving its car-line system, etc.

Birmingham — Iron Company.—Woodward Iron Co. will increase capital stock from $1,000,000 to $2,000,000.

Birmingham—Land Improvement.—S. D. Weakley, E. A. Weakley and Edward T. Rice have incorporated Magnolia Land Co., with capital of $10,000, for improving and dealing in real estate, etc.

Birmingham—Oil and Gas Wells.—Alabama State Development Co., with capital of $20,000, has been incorporated, with C. E. Rickey, president; Louis V. Clarke, vice-president; J. H. Heineke, secretary and treasurer. Company owns 3000 acres of land, and has complete drilling outfit in operation for developing petroleum gas wells.

Childersburg—Gold Mines.—Rev. W. M. Taylor of Greenville, Texas, will organize company for development of gold mines.

Ensley — Hardware. — Chartered: Ensley Hardware Co., with capital of $10,000, by N. W. Scott of Ensley, W. G. Estes and J. E. Johnson of Birmingham.

Ensley—Coal Mines.—Lucile Coal Co. has organized, with capital of $10,000, for development of coal mines in the Cahaba fields; daily output to be 150 tons. Norman Morrison, John Powell and W. J. Martin are the incorporators.

Huntsville — Rug Factory. — Chamber of Commerce is corresponding with Philadelphia parties, who contemplate establishing rug factory.

Huntsville—Wagon Factory.—Efforts are being made for establishment of a wagon factory; R. E. Pettus said to be interested.

Huntsville—Bridges.—Judge S. M. Stewart and the county commissioners have continued the special bridge fund of $8000, and will erect several small steel bridges.

Mobile—Iron Works.—Cook & McLaurie of Montgomery, Ala., have contract for erection of new plant of Alabama Iron Works; building will be two stories, of brick, 96x62 feet, and equipped with an overhead traveling crane of fifty tons capacity.

Montgomery—Telephone System.—State is constructing private telephone line to connect the penitentiary at Wetumpka with the State farms at Speigners and in Montgomery county. Twenty-five miles of wire will be strung. Judge J. M. Carmichael, president State convict board, may be addressed.

Montgomery—Manganese Mines.—Company has been organized, with capital stock of $100,000, for developing manganese mines in North Alabama. Those interested include Bradford Dunham, president; Edgar Andrews, secretary; Capt. E. P. Armerine, Sam Sabel and Warren D. Brown, Jr.

New Decatur — Veneering Mill. — Arantz Bros. Lumber Co. will add veneering plant, also make large additions and improvements to saw and planing mill; estimated cost of improvements, $10,000.

Talladega—Iron Furnace.—North Alabama Coal, Iron & Railroad Co. will blow in its Talladega furnace about January 15.

ARKANSAS.

Bay—Mercantile.—Chartered: Elder Bros., with capital of $4000, by J. S. Elder and others.

Dodd City—Zinc Mines.—Nakomis Zinc Mining Co., incorporated last March, has its mill about completed, and will soon begin active developments; James C. Ley, president.*

Eureka Springs—Water Company.—Chartered: Eureka Water Co., with capital of $50,000, by M. F. Gear, president; John D. Jordan, vice-president, and F. N. Claflin, secretary and treasurer.

Helena—Mercantile.—Chartered: Wooten-Agee Company, with capital of $50,000, by G. A. Wooten and others.

Hot Springs — Medicine Factory. — Chartered: Coscura Remedy Co., with capital of $30,000, by S. R. Jackson, president; Alfred Newhouse, secretary, and Harry R. Vaughan, treasurer.

Little Rock — Cold Storage. — Chartered: Brockman Commission & Cold Storage Co., with capital of $15,000, by T. W. Brockman, president; Jean Reutlinger, vice-president and treasurer, and W. A. Colby, secretary.

Little Rock—Cold Storage, etc.—Cane Hill Cold Storage & Orchard Co. has been incorporated, with capital of $40,000, by W. G. Vincenheller, president; W. H. Whitlow, vice-president; Chas. A. Rees, secretary, and John R. Harris, treasurer.

Little Rock—Compress Company.—Chartered: Little Rock Compress Co., with capital stock of from $80,000 to $200,000, by Henry M. Cooper, H. L. Remmel, H. B. Carter and others.

Little Rock—Mercantile.—Chartered: A. Lofton Dry Goods Co., with capital of $20,000, by A. Lofton (president) and others.

Piggott—Catering.—Chartered: Valley Catering Co., with capital stock of $200,000, by Henry Holborn and others.

Pine Bluff—Mercantile.—Chartered: Alexander Bros. Co., with capital of $25,000, by W. B. Alexander and others.

Pine Bluff — Land Company. — Citizens' Land Co., with capital of $33,000, has been incorporated by J. A. Brewster, president; W. J. Galbraith, vice-president, and J. F. Rutherford, secretary.

Van Buren—Mercantile.—Chartered: The Boston Store, with capital of $75,000, by Max J. Myers (president) and others.

FLORIDA.

Bartow — Phosphate Mines. — Dominion Phosphate Co. has been incorporated, with capital stock of $90,000, to develop phosphate mines, etc., by A. D. Wright, C. S. Ross and David Tislale.

Mulat—Lumber Mill.—Otis & Whitmire will rebuild their lumber mill reported burned.

Palmetto—Ice Factory.—Palmetto Ice & Power Co. has been incorporated, with capital of $15,000, by W. M. Fielder, J. E. Wilson, J. W. Brannon and others.

Quincy—Tobacco Company.—Wedeles Tobacco Co. has incorporated, with capital stock of $100,000, to conduct general tobacco and merchandise business.

Tampa—Cigar Factory.—Heineman Bros. of Baltimore, Md., previously reported to establish a cigar factory, have incorporated El Arte Manufacturing Co., with capital stock of $50,000. Milton and Mortimer Heineman and Isaac Leopold are the incorporators.

Tampa—Car Works.—It is reported that A. H. Sisson, vice-president of the Jewett Car Co. of Newark, N. J., contemplates establishing a plant at Tampa to make both electric and steel cars.

GEORGIA.

Atlanta—Real Estate.—Steiner-Emery Company has been incorporated, with capital of $30,000, for developing and improving real estate, by Albert Steiner, Edward S. McCandless and others.

Cedartown—Flour Mill.—E. M. Stults of Ashtabula county, Ohio, is negotiating for building with a view to installing a roller process flour mill with capacity of from 80 to 100 barrels per day.

Douglas—Supply Company.—Douglas Supply Co. has been organized, with capital of $15,000, and privilege of increasing to $150,000, by W. O. Paxson, Frank L. Sweat, B. Peterson and others.

Fitzgerald—Artificial Stone Works.—J. M. Mosher, E. H. Wilkerson, H. C. Stevenson and others have incorporated Fitzgerald Artificial Stone Co., with capital of $10,000, for the manufacture of artificial stone.

Jackson — Mercantile. — Chartered: Moon Mercantile Co., with capital of $15,000, by B. F. Moon (president) and others.

Jackson — Planing Mill.— Jackson Roller Mills will add planing mill in connection with its flour mill.

Rome—Power-house.—City Electric Railway will probably build a new $25,000 power-house.

Sandersville—Cotton-oil Mill and Electric-light Plant.—Louis Cohen is interested in organization of company for establishment of cottonseed-oil mill and electric-light plant.*

Warrenton—Knitting Mill.—B. L. Battle Manufacturing Co. will probably rebuild its burned $30,000 knitting mill, although a definite decision has not been reached.

KENTUCKY.

Junction City—Stave Mill.—Geo. J. Miller is interested in establishment of factory with capacity of 8000 staves per day and 800 sets of heading.

Lexington—Oil, Gas and Mining Company. Central Oil, Gas & Mining Co. has increased its capital stock from $250,000 to $500,000.

Louisville—Steam Power-house.—H. Walters has made plans for boiler and engine-room for Rabbert Milling Co.

Louisville — Mercantile. — Chartered: P. Winkler's Sons Co., with capital stock of $35,000, to conduct grocery business, by Henry Winkler and others.

Mayking — Coal, Mineral and Timber Lands.—Virginia Coal & Iron Co. has purchased 15,000 acres of coal, timber and mineral lands, and will develop same at once.

Somerset—Oil Wells.—Emerald Oil & Gas Co. has been incorporated, with capital of $10,000, for developing oil properties, with John A. Geary of Somerset as president; M. W. Maguire of Chattanooga, Tenn., vice-president, and M. F. Molloy of Cincinnati, Ohio, secretary.

LOUISIANA.

Abbeville—Irrigation Canals.—Elias Broussard, Lodius Le Blanc, J. N. Greene and others have incorporated, with capital stock of $15,000, Bayou Tigre Canal Co., Limited, for constructing irrigating canals, etc.

Jennings—Electric-light Plant and Sewerage.—City will vote February 18 on issuance of $25,000 of bonds for construction of water-works and $15,000 of bonds for sewerage, recently mentioned. Address "The Mayor."

Jennings — Mercantile.— Chartered: E. F. Walker Grocery Co., Limited, with capital of $20,000, by E. F. Walker (president) and others.

New Orleans—Real Estate and Mercantile Company.—J. P. Alexander, John W. Griffin, D. J. Mulligan and others have incorporated J. P. Alexander Co., Limited, with capital of $50,000, for real estate and mercantile business.

New Orleans—Shipbuilding Plant, etc.—J. S. Waterman, Sam Henderson, Jr., and William A. Wenck have incorporated, with capital stock of $5,000,000, the New Orleans Shipbuilding & Docking Co., to equip and operate docks, wharves, shipbuilding plant, etc.

New Orleans—Robert F. Grace, William D. Grace, Dr. Arthur Caire, C. Victor Vignes and others have incorporated Kentucky & Louisiana Oil & Refining Co., Limited, with capital stock of $500,000, for development of oil wells and mineral lands, refining of oils, etc.

New Orleans—Sugar Mills, etc.—J. Allen Barnett, Jas. W. Barnett, Robert S. Barnett and others have incorporated Shadyside Sugar Planting & Manufacturing Co., Limited, with capital of $500,000, for establishment of sugar mills, manufacture of syrup, etc.

Roanoke—Rice Mill.—R. C. Augustine, John R. Rodgers, Frank L. Suffern, J. S. Sweeny, all of Decatur, Ill., and others have incorporated Roanoke Rice Milling Co., with capital stock of $40,000, for establishing rice mill of 1500 barrels per day capacity.

Vinton—Canal.—Chartered: Sabine Canal Co., with capital stock of $500,000, to construct irrigation canal, by B. D. Hurd, president; V. D. Ford, secretary, and Albert Barnes, treasurer.

MARYLAND.

Baltimore—Quarrying.—Hook Quarry Co. has been incorporated, with capital of $10,000, for developing stone and mineral quarries, by Chas. A. Hook, Jr., J. Frederick Shafer, David A. Barrett and others.

Baltimore—Engraving.—Chartered: Maryland Engraving Co., with capital of $10,000, by Frank C. Pearre, Frank M. Clotworthy, Edward Taylor and others.

Baltimore — Contracting, etc.—Noel Construction Co. has been incorporated, with capital stock of $250,000, for conducting general contracting and building business, by E. M. Noel, David W. Thomas, J. D. Kline and others.

Cambridge — Shirt Factory. — Cambridge Shirt Co. has been incorporated, with capital of $11,000, for conducting shirt factory (already established), by Edw. G. Hopkins, Brice W. Goldsborough, James C. Johnson and others.

Hagerstown — Reservoir. — Washington County Water Co. has had plans made for construction of new reservoir with capacity of 100,000,000 gallons. Company will hold meeting next month to vote on increasing capital from $80,000 to $100,000.

Hagerstown—Silk Mill.—It is reported that Victor Cromer, Charles Cromer and Wingert Bros. will establish silk mill.

Luke—Pulp and Paper Company.—West Virginia Pulp & Paper Co. is making extensive improvements, including installation of electric motors to furnish power for entire plant. New brick power-house is in course of erection.

Washington, D. C.—Gun Factory.—Ball Bearing Rifle Co., reported recently as incorporated with capital stock of $500,000, intends to locate a plant for the manufacture of its ball-bearing rifle guns near Washington, and is negotiating for site at or near Alexandria, Va., or Laurel, Md. Address for particulars Orlan Clyde Cullen, care of E. W. Anderson & Co., 700 Seventh street N. W., Washington.

MISSISSIPPI.

Biloxi—Water-works.—City has voted issuance of $40,000 in favor of buying local water-works or constructing new plant. Address "The Mayor."

Gloster—Electric-light Plant and Water-works.—Contract for erection of electric plant and construction of system of water-works at Gloster has been awarded to E. J. O'Beirne of Birmingham, Ala., at $22,540.

Goodman — Mercantile.— W. L. Simmons and others have incorporated Simmons-Powers Company, with capital of $25,000.

Kosciusko — Excelsior Factory. — Oldham Lumber Co. contemplates establishing plant for manufacture of excelsior.*

Starkville—Textile Company.— Chartered: Textile Novelty Co., capital $10,000, by S. Kohorn and others.

Stevens—Lumber Mill.—A. W. Stevens Lumber Co. has been incorporated, with capital of $75,000, for saw-mill and lumber business. A. W. Stevens is president; C. H. Stevens, vice-president; C. E. Marshall, secretary, and E. F. McNair, treasurer.

Vicksburg—Cotton Company.— Chartered: Burnett & McKee Co., capital $60,000, for dealing in and manufacturing cotton, etc.

Yazoo City—Electric Plant, Water-works and Sewers.—Kirkpatrick & Johnson, Jackson, Miss., will prepare plans and specifications for water-works, electric-light plant and sewers; Edward Luke, mayor.

MISSOURI.

De Soto—Mining.—Chartered: Independent Mining Co., with capital of $5000, by G. H. Hamel, Jr., C. H. Williams and others.

Kansas City—Construction Company.—Chartered: Burnham-Elliott Construction Co., with capital of $3000, by W. E. Burnham, C. P. Elliott and Earnest Burnham.

Kansas City—Lumber Company.—Minnetonka Lumber Co., with capital of $60,000, by C. J. White, S. H. Wilson and R. A. Long.

Kansas City—Commission Company.—Chartered: Charles H. Kuehne Commission Co., with capital of $10,000, by Chas. H. Kuehne and others.

Kansas City—Furnace Company.—Prest Furnace Co., reported lately as incorporated, has organized for manufacture and sale of the Prest tubular and Prest corrugated furnaces, with a plant having a yearly capacity of 1000 furnaces. M. A. Foster, treasurer, may be addressed.

Memphis—Commission Company.—Chartered: Farmers & Traders' Commission Co., with capital of $10,000, by David Schenck, E. F. Maxey, J. E. Mount and others.

St. Louis—Lightning-rod Company.—Chartered: St. Louis Lightning Rod Co., with capital of $15,000, by Henry F. Kretzer, August F. Miller, Geo. A. Miller and others.

St. Louis—Store-fixture Company.—Broadway Store Fixture Co., with capital of $20,000, has been incorporated by August D. Gerbig, Frederick Kick and Henry Platzek.

St. Louis.—Chartered: American Home Buyers' Co., with capital of $10,000, by David W. Young, Thos. H. Guthrie and E. A. Hoffman.

St. Louis—Construction Company.—Missouri & Southern Construction Co. has been incorporated, with capital of $8000, by N. Erb, I. M. Sittenhotfer, R. E. Rombauer and others.

St. Louis—Electrical-appliance Company.—Chartered: American Electrical Appliance Co., with capital of $5000, by Wm. A. Corrao, H. E. Corrao and J. E. Reid.

St. Louis—Mining.—St. Louis-Enon Mining Co., with capital stock of $240,000, has been incorporated by J. E. Chandler, Chas. F. Wennecker, F. A. Martin and others.

St. Louis—Fish Company.—Chartered: Proctor-Connell Fish Co., with capital of $10,000, by W. O. Proctor, John F. Connell and others.

St. Louis—Publishing.—Chartered: State Republican Publishing Co., with capital of $20,000, by E. C. Brockmeyer, A. J. Walsh and Thos. H. Rogers.

St. Louis—Syrup Factory.—S. N. Long Syrup Co. will rebuild at a cost of $80,000 its syrup factory, recently burned. Architect F. C. Bonsack is awarding the contracts.

St. Louis—Construction Company.—St. Louis Construction Co. has been incorporated, with capital of $10,000, by Jos. P. Kelly, John P. Boyce, Lon O. Hocker and others.

St. Louis—Development Company.—Southwestern Development Co. has been incorporated to conduct mining, manufacturing, mercantile and transportation business, by W. K. Post, Henry E. Tobey, Geo. E. Daniels and others, all of New York city. Authorized capital is $600,000.

NORTH CAROLINA.

Asheville—Lumber Company.—Chartered: J. S. Coleman Lumber Co., with capital stock of $25,000, by J. S. Coleman, Geo. W. Eisenhauser and Daniel MacLea.

Cullowhee—Copper Mines.—Cullowhee Copper Co. has been incorporated, with authorized capital of $100,000, for developing copper, gold, silver and other minerals; incorporators include D. D. Davis and Thomas A. Cox of Cullowhee, Robert E. Bower of Biggs, S. C., and others.

Durham—Mercantile.—Sneed-Markham-Pearson Company, with capital stock of $5000, and privilege of increasing to $50,000, has been incorporated.

Durham—Woodworking Factory.—Seula Woodworking Co. has been incorporated, with capital of $10,000, by B. A. Griswold, J. S. Carr, Jr., and S. M. Wheeler.

Durham—Mercantile.—Chartered: Sneed-Markham-Pearson Company has been incorporated, with capital of $6000, by J. H. Sneed and others.

Elizabeth City—Electric-light Plant and Water-works.—C. M. Ferebee and Geo. W. Ward have petitioned the city council for authority to establish an electric-light and power plant, and two applications have been made from water-works companies represented by P. H. Williams and Mr. Bender of Norfolk, Va., and the other by I. M. Meekins, Jr., Geo. W. Ward and Percy McMullan.

Enfield—Knitting Mill.—Enfield Knitting Mills has ordered twenty-five additional machines; also will install dyeing plant.

Fayetteville—Lumber Mills, etc.—Norfolk (Va.) parties have secured options on timber properties in and around Fayetteville, and will erect plant, consisting of dry-kilns, saw and planing mills with an output of 25,000 feet of lumber a day. D. T. Oates of Fayetteville may give information.

Greensboro—Electric-light Plant.—Standard Electric Co. of Danville has contracted for an electric-light plant at Greensboro of 100 arc lights capacity, and for supplying the town commercially.

High Point—Iron-bed Factory.—Joel Blair is interested in the establishment of an iron-bed factory.

Huntersville—Cotton Mill.—Anchor Mills is reported as to double its plant; now has 4100 spindles.

Laurinburg—Electric-light Plant and Water-works.—City will erect electric plant and construct system of water-works. Address "The Mayor."

Mebane—Furniture Factory.—White Furniture Co. will enlarge its factory by erection of three-story addition 75x118 feet and installing a 250-horse-power Corliss engine and other machinery.

Raleigh—Storage Warehouse.—J. W. Stephenson, A. K. Smith, S. S. Holt and W. H. Austin have organized Austin-Stephenson Company to conduct storage-warehouse business, etc.

Reidsville—Telephone Exchange.—Reidsville Telephone Co., with capital stock of $20,000, will be incorporated by C. N. Evans, president, and Francis Womack, secretary and treasurer, for enlargement of Reidsville telephone exchange (lately reported) and construction of several long-distance lines.

Salisbury—Woodworking Factory.—Peacock Manufacturing Co. has been incorporated, with capital of $25,000, for manufacturing lumber, by J. M. Peacock, president, and A. H. Graf, secretary and treasurer. The plants of Mr. Peacock at Salisbury and of Mr. Graf at Albemarle have been consolidated, and will operate under above name.

Salisbury—Mercantile.—Chartered: Miller Grocery Co., with capital of $15,000, by W. H. Miller and others.

Sanford—Furniture Factory.—Fitts-Crabtree Manufacturing Co., with capital of $10,000, has been incorporated for the manufacture of furniture, by W. H. Fitts, W. A. Crabtree and Flora M. Campbell.

Smithfield—Mercantile.—Chartered: Cotter-Underwood Company, with capital of $10,000, by J. A. Morgan, R. O. Cotter and J. N. Underwood.

Statesville—Hardware Company.—Thomas Hardware Co., with capital of $30,000, has been incorporated by W. A. Thomas, E. R. Timmons, J. R. Wylett and others.

Tarboro—Mercantile.—Chartered: Roberson, Newton & Co., with capital of $20,000, by J. K. Newton and others.

Wilmington—Brokerage.—Wilmington Brokerage Co. has been incorporated, with capital of $25,000, by John E. Crow, Geo. D. Crow and C. C. Brown.

Wilmington—Electrical Construction Company.—John Frank, W. H. Howell, W. A. Lawrence, J. C. Brook, J. W. Kelly and others have incorporated Wilmington Electric Supply & Construction Co., with capital of $25,000, to deal in electrical supplies and conduct general electrical and mechanical construction business.

SOUTH CAROLINA.

Abbeville—Electric-light Plant.—Abbeville Electric Light & Power Co. will rebuild at once its plant reported burned.*

Beaufort—Telephone System.—R. A. Long and associates are interested in construction of telephone system.

Columbia—Laundry.—F. Schmidt will rebuild the Columbia Steam Laundry, reported burned.

Duncans—Flour Mill.—T. W. Moore will rebuild his flour mill recently burned.

Fairmont—Cotton Mill.—Bivingville Cotton Mills, lately reported incorporated, should have read Tyger Cotton Mills, and is a reorganization of the Fairmont Mills; C. P. Mathewes of Spartanburg, S. C., president.

Lockhart—Cotton Mill.—It is reported that Lockhart Mills will build an additional mill; now has 25,000 spindles and 800 looms.

Walhalla—Water-works.—Blue Ridge Water Co., previously reported, has completed organization, electing J. W. Shelor, president; W. A. Strother, vice-president; J. W. Holleman, secretary, and W. L. Verner, treasurer. Preparations will be made at once for commencing construction of proposed water-works.

TENNESSEE.

Bradley County—Oil Wells.—W. B. Royster of Chattanooga has, with others, leased properties in James and Bradley counties, and will organize stock company for developing oil wells.

Bristol—Gas and Electric Company.—Properties of Bristol Gas & Electric Co., Bristol Light & Power Co. and Bristol Belt Line Railway Co. will be operated under one management, known as the Bristol Gas & Electric Co., reported recently as incorporated with capital stock of $300,000. Benj. L. Dulaney is president.

Dyer—Fruit-basket Factory.—Dyer Fruit Box Manufacturing Co. is preparing to rebuild its plant recently burned.

Elizabethton—Steel Plant.—The Electric Furnace Co. (to be addressed care Seele & Hutchinson, 52 William street, New York) will build the steel plant recently mentioned. The company has obtained from Watauga Land Co. land and riparian rights, and will develop water-power for utilization in its steel plant, expending probably, it is reported, about $500,000.

Fentress County—Coal Mines.—C. H. Treat, J. H. Haws of New York and W. S. Taylor of Philadelphia, Pa., have purchased and will develop 12,000 acres of bituminous coal lands.

Jonesboro—Veneer Company.—Chartered: Edwin F. Smith Veneer Co., with capital of $25,000, by Edwin F. Smith, Chester B. Allen, Jerome B. Thomas and others.

Johnson City—Chemical Works.—Geo. T. Wofford, T. V. McCown and P. H. Wofford have organized Imperial Chemical Co. for manufacture of extracts, medicines, etc.

Knoxville—Pants Factory.—Knoxville Pants Manufacturing Co. has moved into new quarters, where it will install new plant with forty-five machines; will have output of about twenty-five dozen per day; orders for machinery have been placed.

Knoxville—Trunk Factory.—Whittle Trunk Co. has installed additional machinery for increasing capacity of its trunk factory.

Lawrenceburg—Cotton Mill.—Eagle Cotton Mills (W. H. Dustin, proprietor) will rebuild burned plant, to have 4000 spindles.*

Memphis—Telephone Company.—Memphis Telephone Co. has increased capital from $200,000 to $600,000.

Memphis—Lint Mill.—J. O. Kretzschmar has purchased and will operate the Memphis Lint Co.'s mill. Some new machinery will be added.*

Memphis—Lumber Company.—Tennessee Lumber Co. will increase capital from $10,000 to $25,000.

Memphis—Heating and Appliance Company.—New Century Heating & Appliance Co. has been incorporated under New Jersey laws, with capital stock of $1,000,000, to manufacture heating and ventilating apparatus, by Thomas L. Jones, W. K. Burton, P. W. Beach and others.

Milan—Excelsior Factory.—Southern Excelsior Co. of Nashville, Tenn., will establish excelsior factory at Milan, as recently reported.*

Nashville—Mercantile.—Chartered: R. J. Tinsley Millinery Co., with capital of $40,000, by R. J. Tinsley and others.

Nashville.—Chartered: Co-operative Industrial Union, with capital of $1000, by S. M. Billups and others.

Nashville—Cold-storage Plant.—It is reported that Armour & Co. will erect a $25,000 building and cold-storage plant at Nashville.

Nashville—Woolen Mill.—W. W. Gregg, Robert E. Gregg, C. R. Curtis, W. W. Gregg, Jr., and J. V. Gregg have incorporated Leeds Woolen Mills Co., with capital of $30,000.

Nashville—Fertilizer Plant.—Federal Chemical Co. of Louisville, Ky., has, it is said, closed deal for purchase of twenty acres of land in West Nashville for $12,000 as site for the proposed $200,000 plant recently reported as contemplated.

Newport—Lumber Mills.—Chartered: Spotless Lumber & Manufacturing Co., with capital of $10,000, by John E. Rebstock, Geo. W. Carroll, Calvin S. Watson and others.

TEXAS.

Abilene—Mercantile.—Chartered: Boston Dry Goods Co., with capital of $15,000, by C. C. Tate and others.

Austin—Telephone and Telegraph Company.—Texas Telegraph & Telephone Co. has reorganized, with following officers: C. C. Gibbs of San Antonio, E. W. Cave of Houston, W. R. Hamby of Austin and others.

Bay City—Irrigation Canal.—R. L. Armstrong of Beaumont has completed negotiations for taking over Southern Canal Co., and has awarded contract for canal construction to S. A. Robertson of Orange, Texas. Company will irrigate 10,000 acres of rice lands.

Beaumont—Oil Wells.—Consumers' Oil Co., with capital of $50,000, has been incorporated by D. C. Aldridge of Beaumont, Allison Barry of Sherman, Texas, and others.

Beaumont—Oil Wells.—Chartered: Illinois Oil Co., with capital stock of $100,000, to prospect for oil, by H. C. Ward, W. N. Haskell, M. E. Wilger and others of Sterling, Ill.; C. J. Eastman of Beaumont and others.

Beaumont—Oil Wells, etc.—Texas Petroleum & Refining Co. has been incorporated, with capital stock of $1,000,000, by A. H. Gale, C. H. McNider, I. W. Kerri, F. J. Hanlon and others, for erection of oil refineries, etc.

Beaumont—Oil Refinery.—Sun Oil Refining Co., with capital stock of $1,000,000, has been incorporated by G. W. Smith, G. W. Scott, A. R. Krohn of Chicago, Ill.; F. R. Warner of Mason City, Iowa, and others, to prospect for oil and minerals, construct tanks, reservoirs, etc.

Beaumont—Oil Company.—German-American Oil Co. will increase capital stock to $2,000,000, as lately reported; proceeds from stock to be used for additional tankage and pipe line and equipment generally for handling its output, etc.

Beaumont—Oil Wells.—Cedar Rapids & Marion Oil Co. has been incorporated, with capital of $100,000, by A. M. Britton, Julius Jacobs and E. L. Bradley.

Beaumont—Oil Wells.—United Spindle Top Oil Co., with capital stock of $250,000, has been incorporated by Chas. L. McDonald, Benn Fell, Frank H. Huskins of St. Louis, Mo.; Chas. Boedeker of Eagle Lake, Texas, and others.

Beaumont—Cotton Hoop and Tie Factory. Pittsburg (Pa.) parties are investigating with a view to organizing a $200,000 stock company for the establishment of cotton hoop and tie factory. Among the Pittsburg parties mentioned as interested are Messrs. James Bastable and Darrah.

Beaumont.—Chartered: Beech Domestic Burner & Fuel Oil Co., with capital of $25,000, by L. P. Beech, A. F. Waits and L. F. Chester.

Blossom—Brick Company.—Chartered: Blossom Brick Co., with capital of $30,000, by G. W. Campbell, R. V. Womack and W. E. Lenoir.

Bowie—Cannery.—M. McCullum of Missouri is interested in organization of company for establishing a cannery.

Cooper—Lumber Company.—Weldon-Smith Lumber Co. has increased capital from $10,000 to $20,000.

Dallas—Machine Shops.—Dillon Machine Co. has purchased for $13,000 the old Magnolia Mills property, and will equip same as a large machine shop.

Corsicana—Oil Refinery.—James Garrity and Roger Q. Mills have awarded contract for two steel storage tanks of 80,000 barrels capacity. They are also having pipe-line system surveyed, and will erect a large oil refinery.

Dallas—Office Supply Company.—Dallas Office Supply Co., with capital of $20,000, has been incorporated by W. T. Russell, Geo. Stickney and others.

Dallas—Saddlery Company.—Chartered: G. H. Schoellkopf, to deal in saddles, with capital stock of $150,000, by G. H. Schoellkopf, J. W. Spake and others.

Fort Worth—Grain Elevator.—Texas Grain & Flour Co. is considering the erection of a $250,000 grain elevator.

Fort Worth—Manufactory.—William L. Black has invented and patented device to keep in position the pumping rod of windmills, and will organize company to erect plant for its manufacture.

Galveston—Irrigation Company.—Fort Bend Irrigation & Canal Co. has been incorporated, with capital of $20,000, by D. W. Kempner, T. J. Groce and B. P. Reading.

Galveston—Creosoting and Construction Company.—Chartered: International Creosoting & Construction Co., with capital stock of $300,000, by T. W. English, J. W. Byrnes, G. B. Miller and others.

Houston Heights—Oil Refinery.—Southwestern Oil Co. is, it is said, installing $100,000 worth of new machinery for enlarging its refinery.

Houston—Rice Mill.—Houston Rice Milling Co., reported during the week as incorporated, will erect a $25,000 rice mill of 800 barrels per day capacity; Bernard Brown, secretary.

Houston—Oil Wells.—Becky Sharp Oil Co., reported recently as incorporated with capital stock of $1,000,000, will develop its oil properties on an extensive scale. John M. Dorrance of Houston is president; E. B.

Spotts of Houston, first vice-president; Chas. Dillingham, treasurer, and C. M. Kella, secretary.

Houston—Canal Company.—Brazos Canal Co. has been incorporated, with capital stock of $300,000, by J. S. Dougherty of Houston, Burton D. Hurd of Kansas City and Vernon O. Ford of Beaumont, to establish and maintain a system of irrigation.

Houston—Basket Factory.—Ed. Davis and others have organized Houston Splint Basket Co., and will establish factory for manufacturing baskets with capacity of 240 dozen per day.

Houston—Oil Tank.—Gulf, Colorado & Santa Fe Railroad Co. will erect 10,000-barrel oil tank.

Houston — Packing Company. — Houston Packing Co. has increased capital from $180,000 to $250,000.

Itasca — Electric-light Plant.—James W. Hockaday will install electric-light plant, to be started with 1500 lights, but so built as to be increased to 3000 or 4000 lights when necessary.

Midlothian — Grain Elevator.—Midlothian Grain & Elevator Co. will rebuild its grain elevator recently burned; will install steel tanks.*

Moody — Mill and Elevator.— Chartered: Moody Mill & Elevator Co., with capital of $20,000, by J. C. Reynolds, J. P. Rice, D. C. Jones and others.

Nacogdoches—Light and Power Plant.—Chartered: Nacogdoches Light & Power Co., with capital of $20,000, to supply light by electricity and motor power, by I. L. Sturdevant, K. P. Branch and O. E. Hubbard.

Navasota—Mercantile.—Chartered: R. B. Templeman & Son Co., with capital of $50,000, by Ward Templeman and others.

Paris — Furniture Company. — Chartered: Paris Second-Hand Furniture & Supply Co., with capital of $6000, by W. E. Knight and others.

Port Arthur—Ship Canal, etc.—Port Arthur Canal & Dock Co. has been incorporated, with capital stock of $1,000,000, to operate ship canal, maintain docks, wharves, elevators, warehouses, etc., by S. R. Knott of Kansas City, Mo.; R. A. Greer of Beaumont, J. W. Henderson of Port Arthur and others.

Port Lavaca — Telephone System. — A. Marsh, F. M. Dudgeon and Willett Wilson have formed company for construction of telephone system to connect with the long-distance wires at Victoria. About 800 posts will be required.

Stamford—Cotton-oil Mill.—S. M. Swenson & Sons, 15 Wall street, New York, N. Y., will erect cotton-oil mill, as recently reported.

Terrell — Mercantile. — Chartered: A. P. Nuckalls Company, with capital of $25,000, by A. P. Nuckalls and others.

Texarkana.—Chartered: Texarkana Fruit Farm Co., with capital of $20,000, by E. K. Smith, B. H. Williams and W. L. Warmoth.

Vernon—Cotton-oil Mill.—J. D. Hagler has organized a $50,000 company for establishment of cottonseed-oil mill.

VIRGINIA.

Botetourt—Saw-mill, etc.—J. L. Cronise contemplates installing small saw-mill, engine and flooring machine.*

Burkeville—Flour Mill.—R. B. Wariner of Jetersville has purchased the flour mill at Burkeville from J. L. Bradshaw & Co.; will improve and operate same.

Marion—Broom Factory.—Marion Broom Co., A. T. Short, secretary and treasurer, has been organized for manufacturing brooms.*

Martinsville — Telephone System.—D. L. Bowles, T. N. Barbour, J. D. Sparrow and associates are organizing company and applied for franchise for construction of telephone system.

Newport News — Mercantile. — Chartered: Gregory-Morris Company, with capital of $25,000, for conducting grocery, by F. L. Gregory and others.

Norfolk — Hardwood Factory. — Norfolk Hardwood Co. (not Hardware, as recently reported) has increased capital from $5000 to $10,000.

Portsmouth — Basket Factory.— Reynolds Manufacturing Co., lately reported under Norfolk as incorporated, has purchased Portsmouth Basket Works; will improve and operate same.

Portsmouth—Pipe Works.—Wyckoff Pipe Co. will remove its plant from Money Point to Berton's Point, also remove its Williamsport (Pa.) plant to this point, consolidating the two and operating as Wyckoff Pipe & Creosoting Co.

Richmond—Water Supply.—John C. Robertson of Chesterfield, Va., and Robt. F. Morris, C. E., have submitted a proposition to furnish Richmond with a new water supply. It is proposed to erect a settling basin at a cost of about $200,000. Address Superintendent Bolling of the water-works in regard to basin.

Richmond—Gas-atomizer Works.—Negotiations are pending for the establishment of a plant for the manufacture of a gas atomizer for providing gas for light and cooking purposes. Fritz Sitterding and Allen G. Collins are interested.

Richmond—Locomotive Works.—Richmond Locomotive Works has awarded contract to J. T. Wilson for erection of its proposed additional $100,000 shops.

Richmond—Wheel and Machine Works.—Shelton Water-Wheel and Machine Works will be incorporated, with capital stock of $100,000 and James L. Shelton, president, for operating wheel and machine works to be removed to Richmond from West Chester, Pa.

Stanardsville — Flour Mill. — Stanardsville Milling Co. will build flour mill of about thirty or thirty-five barrels capacity.*

WEST VIRGINIA.

Benwood—Supply Company.—Koch Supply Co., with capital of $25,000, has been incorporated by W. H. Koch of Wheeling and others.

Charleston—Paint Factory.—Jas. H., D. H. and W. S. Gates have organized Gates Manufacturing Co., and will install complete paint factory.

Charleston—Oil Wells.—C. W. Hall, G. O. Chilton, N. S. Burlew and others have incorporated Damon Oil Co. for operating oil, gas and mineral lands; authorized capital is $10,000.

Charleston—Mercantile.—Chartered: Frank Payne Company, with authorized capital of $100,000, by Frank Payne and others.

Claremont — Real Estate. — Rock House Fork Land Co. has been incorporated, with authorized capital of $100,000, by George Lawton of Claremont, V. L. Black and S. P. Richmond of Charleston and others.

Fairmont—Coal Mines.—J. E. Sands, Wm. S. Stephenson and E. F. Hartley have consummated the sale of 1000 acres of coal lands to Baltimore, Md., parties, who will construct a railroad for developing the property.

Grafton — Woodworking Factory.—O. G. Augir has purchased Grafton Pump Factory, as recently reported, and will make of it an up-to-date plant for lumber, planing-mill work, builders' supplies, etc.; plant is already equipped with woodworking machinery.

New Martinsville—Roofing and Cornice Works.—Wheeling Roofing & Cornice Co. of Wheeling, W. Va., is said to be preparing to build large plant at New Martinsville, and to remove Wheeling plant to that point.

Salem — Publishing. — Chartered: Salem Express Publishing Co., with capital of $10,000, by E. D. Tellers, C. H. Trainer, E. J. Ehret and others.

Welch—Real Estate, Mining, etc.—Hensley Land Co., with capital of $25,000, has been incorporated for conducting general real estate, mining and manufacturing business, by E. P. Rucker, W. W. Whyte, John A. Henckey and others.

Welch—Coal Mines.—Hensley Coal Co. has been incorporated, with capital of $25,000, by E. P. Rucker, W. W. Whyte, John A. Henckey and others, for development of coal mines, manufacture of coke, etc.

Wheeling — Coal Mines, etc. — Hitchman Coal & Coke Co. has been incorporated, with capital stock of $1,000,000, to mine coal and minerals, manufacture coke, etc., by W. H. Koch, Howard Hazlett, Lawrence E. Sands and others.

Wheeling—Foundry and Machine Works.—Center Foundry & Machine Co., for manufacturing castings and machinery of all kinds, has been chartered, with authorized capital of $50,000, by M. N. Cecil, A. T. Young and Mary Young.

Wheeling — Real-estate Improvement. — Chartered: Real Estate Improvement Co., with capital of $25,000, for real-estate improvement, by John C. Devine, Joseph Handlan, L. P. Stifel and others.

Wheeling—Lumber Mills, etc.—Cherokee Land Co., recently incorporated, has purchased Apalachian Land & Lumber Co., and will join with Tucker & Barrett of Grand Rapids, Mich., in manufacturing lumber. Company has about 12,000 acres of timber land, upon which are railroads, saw-mills, etc. E. C. Myers will be president and general manager.

Wright—Coal Mines.—Miller Coal Co., with authorized capital of $50,000, has been incorporated by G. H. Caperton, Fire Creek, W. Va.; W. G. Caperton of Wright, A. E. Miller of Staunton, Va., and others.

INDIAN TERRITORY.

Canadian — Mercantile.—Crowder Mercantile & Investment Co. has been incorporated, with capital of $50,000, by W. E. Crowder, M. C. Staas, J. D. Tignor and others.

OKLAHOMA TERRITORY.

El Reno—Electric-light Plant.—Henry Lassen and John A. Masters have purchased plant of El Reno Electric Light & Telephone Co., will erect new building and install new equipment at a cost of $30,000.

Granite—Oil Wells.—Red River Oil Co., reported recently as incorporated with capital stock of $750,000, has leased 2000 acres of oil lands, and will erect machinery for developing same; C. H. Myers, president.

Mangum—Ice and Cold-storage Plant.—Mangum Ice & Cold Storage Co. has been incorporated, with capital of $15,000, by J. E. Pace, S. A. Heatley and others.

Pawnee—Ice and Cold-storage Plant.—Pawnee Ice & Cold Storage Co. has been incorporated, with capital of $15,000, by John W. Henderson, R. J. Henderson and M. A. Lyons.

Sayre — Mercantile. — Chartered: Cook-Ryan Mercantile Co., with capital of $5000, by J. H. Cook and others.

Sterling—Oil Wells.—Chartered: Chandler Creek Oil Co., with capital stock of $1,000,000, by Emil C. Knappe, J. S. Rives, C. E. Jennings and others.

BURNED.

Abbeville, S. C.—Abbeville Electric Light & Power Co.'s plant; estimated loss $5000; also city pumping station; loss $3000. Address "The Mayor."

Acworth, Ga.—Cowan, Moore & Co.'s flour mill; estimated loss $15,000.

Albany, Ga.—Albany Canning Factory.

Columbia, S. C.—Columbia Steam Laundry, owned by P. Schmidt; estimated loss $6000.

Glendora, Miss.—Shulte Hardwood Lumber Co.'s saw-mill.

Goodland, I. T.—Kelly-Smith Grocery Co.'s cotton gin; estimated loss $6000.

Hannibal, Mo.—A. J. Stillwell & Co.'s cold-storage plant; estimated loss $50,000.

High Point, N. C.—Monarch Roller Mills; loss $3000.

Hull, Fla.—Peace River Phosphate & Mining Co.'s plant; estimated loss $100,000.

Iron Gate, Va.—Moffat-David Co.'s tannery. Address company at Elizabeth, N. J.

Lawrenceburg, Tenn.—Eagle Cotton Mills; loss unknown, but insurance is about $15,000.

Missouri City, Texas.—C. H. Williams' cotton gin; loss $2100.

Mulat, Fla.—Otis & Whitmire's lumber and planing mill.

Newport News, Va.—W. H. Davis' brewery.

Rainbow, Texas.—Lem Stewart's cotton gin; loss $2000.

Wilmington—N. C.—Angola Lumber Co.'s dry-kilns; estimated loss $5000.

BUILDING NOTES.

Anniston, Ala.—Business Block.—Charles Nonnemacher will erect a business block to cost $10,000.

Anniston, Ala.—Dwelling.—J. L. Streetman has let contract to W. L. Crim for erection of a residence.

Atlanta, Ga.—Soldiers' Home.—Plans of Bruce & Morgan have been accepted for erection of proposed Confederate Soldiers' Home, and W. L. Calhoun will call for bids at once; to cost $25,000.

Attalla, Ala.—Church.—Methodist Episcopal Church, South, will erect new brick $5000 edifice. Address "The Pastor."

Baltimore, Md. — Custom-house. — Henry Smith & Sons are the lowest bidders (at $771,012) for erection of the proposed new custom-house.

Baltimore, Md.—Warehouse.—Jackson C. Gott has prepared plans for a large warehouse to be erected at 105 and 107 West Fayette street.

Baltimore, Md.—Business Building.—Plans of Baldwin & Pennington have been accepted for proposed building for Lloyd L. Jackson Co., previously reported, and contract awarded for its erection to Henry Smith & Sons; eight stories, of brick and stone, and equipped with elevators, heating, lighting, ventilation, fire-escapes, etc.

Bluefield, W. Va.—Business Building.—L. G. Toney & Co. will erect a four-story business building 30x100 feet.

Bristol, Va.-Tenn.—Business Block.—Smith & Wilson have contract at $12,800 for erection of the proposed Pile business block; to be three stories, of pressed brick, 74x96 feet.

Charleston, W. Va.—Schools.—City will hold an election January 25 to vote on issuance of $55,000 of bonds for erection of school buildings. Address "The Mayor."

El Paso, Texas—Hospital.—Galveston, Harrisburg & San Antonio Railroad will erect $25,000 hospital in El Paso; H. A. Cottingham, division engineer.

Frederick, Md. — Apartment Store. — B. Rosenour & Sons are having plans made by Louis Levi of Baltimore for erection of an apartment store 38x70 feet.

Hazlehurst, Miss.—Courthouse.—G. T. Hallis & Co. of Jackson, Miss., have received contract at $44,603 for erection of proposed courthouse.

Henderson, N. C.—Warehouse.—Contractor Bunn has contract for erection of storage warehouse 24x38 feet for Watkins Hardware Co.

Jasper, Texas—Bank Building.—First National Bank (recently organized), will erect building.

Jennings, La.—Town Hall.—City will vote February 18 on issuance of $10,000 of bonds for erection of town hall recently mentioned. Address "The Mayor."

Kentwood, La.—Bank Building.—Kentwood Bank, O. P. Amacker, president, will erect new bank building.

Laurinburg, N. C.—Hotel.—J. C. Morgan has had plans made by Wheeler, McMichael & Co. of Charlotte for erection of a 30-room hotel.

Livingston, Ala.—Courthouse.—W. A. C. Jones, J. L. Horn and J. L. McConnell, care of probate judge, will open bids February 6 for erection of two-story brick courthouse. Plans, specifications and drawings can be seen at probate office, and at office of Ausfeld & Chapman, architects, Montgomery, Ala. Certified check for $500 and bond required.

Louisville, Ky.—Residence.—Thomas & Bohne have made plans for $20,000 residence for John D. Atter.

Meridian, Miss.—School.—City will issue $40,000 of bonds for erection of a new school building. Address "The Mayor."

Montgomery, Ala.—Hospital.—Contract will soon be awarded for erection of the proposed Charity Hospital, which will be constructed of brick and stone, with tile roof, etc. Address Father R. A. Lennen.

Newnan, Ga.—Residence.—W. H. Daniel will erect residence.

New Orleans, La.—Wharf.—Commissioners of port will open bids February 4 for furnishing material and constructing wharf in accordance with plans on file with Coleman & Malochee, 319 Carondelet street.

Norfolk, Va.—Church.—E. Tatterson has contract at $25,000 for erection of the proposed edifice of Second Presbyterian Church.

Norfolk, Va.—Hotels.—Wilbraham Hotel Co. has been incorporated, with capital of $10,000, for operating hotels in Virginia, by S. L. Wilbraham of Pittsburg, Pa., president; J. G. Wilbraham of Pittsburg, vice-president; John W. Watson of Portsmouth, Va., and others.

Norfolk, Va.—Stores.—Watt, Rettew & Clay will build a row of six large stores.

Norfolk, Va.—Office Building.—Wm. W. Chamberlaine will erect a six-story office building.

Norfolk, Va.—Club Building.—J. H. Pierce's bid of $11,976 was the lowest for erection of proposed new Country Club building.

Oklahoma City, O. T.—Business Building.—Oklahoma Commerce Co. will erect four-story business building 75x120 feet.

San Antonio, Texas—Roundhouse and Depot.—International & Great Northern Railway Co. will, during the year, include in its many improvements the erection of a $55,000 depot and $23,000 roundhouse at San Antonio; Leroy Trice, general superintendent, Palestine, Texas.

Washington, D. C.—Office Building.—Gen. Anson Mills has purchased site for $100,000 and will erect a nine-story steel-frame office building.

West Liberty, W. Va.—Bank and Stores.—W. H. Hearne will have plans made by E. B. Franzheim for erection of bank and store building and small hotel.

RAILROAD CONSTRUCTION.

Railways.

Amarillo, Texas.—It is stated that the extension of the Choctaw, Oklahoma & Gulf Railway Co. has been completed to Texokla, a station on the line between Oklahoma and Texas, and that the extension west to Ama-

rillo will be completed as soon as possible. F. A. Molitor at Little Rock, Ark., is chief engineer of the company.

Bay City, Texas.—Surveys are being completed from Bay City to Velasco in the interest of the Cane Belt Railroad by C. B. Scharman, chief engineer of the company.

Blackwell, Okla.—The Bee Line Construction Co. has been incorporated in Missouri, with $600,000 capital stock, to build the Blackwell, Enid & Southwestern Railroad between Blackwell and Vernon, Texas. Among those interested in the construction company are B. Jones and Edward L. Peckham of St. Louis.

Clintonville, Ky.—Geo. Clay of Clintonville is reported as interested in another electric line planned between North Middletown and Clintonville. A franchise has been asked from the county court.

Crystal City, Mo.—The St. Louis, Memphis & Southern Railroad Co. has been chartered to build from Crystal City to a connection with the St. Louis & San Francisco system in St. Louis county. The promoters of the new company include E. F. Blomeyer of Cape Girardeau, Mo., and other officials of the St. Louis & Memphis Railroad Co., which is now constructing an extension to Crystal City.

Dallas, Texas.—John T. Witt, engineer of the Dallas & New Mexico Railroad, is completing estimates of the cost of constructing the line, and the latest report is to the effect that construction is to begin in a few weeks. The estimated length is seventy-five miles. A. B. Wilgus at Dallas is president of the company.

Dalton, Ga.—A correpondent of the Manufacturers' Record writes that the Dalton & Alaculsy Railroad will be extended to Ducktown, Tenn., a distance of forty-four miles, and that surveys for the same are nearly completed. M. S. Squires of Binghamton, N. Y., is president of the company.

Decatur, Ala.—It is reported that Albert Strauss of New York, president of the Decatur Land Co., has donated terminals for the Decatur, Danville & Southwestern Railroad, proposed between Decatur, Jasper and Tuscaloosa, Ala. Among those interested in the line is John Carlisle of Cincinnati.

Dublin, Ga.—It is announced that the Macon, Dublin & Savannah Railroad Co. has completed its extension between Dublin and Vidalia to a point fifteen miles from the latter town. It is expected to have train service in operation by March 1. James T. Wright at Macon is president of the company.

Elizabeth City, N. C.—C. M. Ferebee has been appointed attorney for the Elizabeth City Electric Railway & Power Co., which, it is understood, proposes building a trolley line from Elizabeth City to a point in Eastern North Carolina. The authorities of Elizabeth City are considering the granting of a franchise to the company to construct its terminals.

Elk Valley, Tenn.—The Elk Valley Coal & Iron Railway Co. proposes constructing a line from Elk Valley to Winfield, an estimated distance of twenty miles. C. J. Baird is one of the promoters, and may be addressed at Elk Valley.

Fairmont, W. Va.—It is reported that Hon. Henry G. Davis and other officials of the West Virginia Central Railroad Co. have planned to build a line from Fairmont to Arnettsville, to reach coal lands along the route. Mr. Davis may be addressed at Elkins, W. Va.

Fort Smith, Ark.—It is reported that the Chicago, Rock Island & Texas Railroad Co. has decided to construct the extension under consideration from Anadarko, Okla., to Fort Smith, if the necessary authority is secured from the government. W. E. Dauchy at Chicago is chief engineer.

Fulton, Ala.—The latest report concerning the Alabama & Tombigbee Railroad is to the effect that ten miles of line are in operation. It is proposed to build an extension twenty-seven miles in length, which will complete it from Fulton to Coffeeville. G. R. Hannon at Fulton is general manager of the company.

Galveston, Texas.—It is announced that the Southern Pacific Railway Co. will build several miles of track to increase its yard facilities on Galveston harbor. G. W. Boschke is engineer.

Graham, Texas.—The business men of Graham have raised the necessary funds to insure the extension of the Chicago, Rock Island & Texas system from Jacksboro to Graham, and it is understood that work will begin in the near future. W. E. Dauchy at Chicago is chief engineer.

Grenada, Miss.—It is announced that the Nashville & Mississippi Delta Railroad Co. has let a contract to build the portion of the line between Grenada and Okolona. The entire length of the line is estimated at seventy-five miles, and it is to extend from Grenada to Nettleton. Hon. J. W. Buchanan of Memphis is one of the principal promoters.

Hattiesburg, Miss.—S. B. Farrar has been appointed chief engineer of the Memphis & Mobile Railroad Co., and surveys for this line between Hattiesburg and Grenada are in progress. Chester H. Pond of Moorhead, Miss., is president of the company.

Helena, Ark.—The Mississippi & Southwest Railroad Co. has been incorporated to build from Helena to the town of Webb, Miss., by way of Clarksdale and Glendale. Among those interested are J. M. Brooks of Clarksdale and E. Speldoch of St. Louis.

Jonesboro, Tenn.—A franchise has been granted to the promoters of the proposed electric railroad between Jonesboro and Johnson City. Hon. W. E. Brownlow is reported to be interested in the project. He may be addressed care of House of Representatives, Washington, D. C.

Littleton, Ala.—It is announced that work has begun on the line to be built from Littleton to the mines of the Sloss-Sheffield Company. The road will be three and one-half miles in length, and when constructed will be operated as a branch of the Southern system.

Lufkin, Texas.—E. A. Frost, general manager of the Texas & Louisiana Railroad Co., writes the Manufacturers' Record that about six miles of extension will be built in the near future, and that contracts have been let, making the total length of the road twenty-five miles.

McBee, S. C.—The Charlotte, Monroe & Columbia Railroad has been completed from McBee to Hamburg, a distance of eleven miles, and it is stated that it is to be extended to Monroe, N. C., during the present year. At Monroe it will connect with the Seaboard Air Line. Wm. Moncure at Raleigh, N. C., is president of the company.

Morgan City, La.—A correspondent of the Manufacturers' Record writes that G. Montegut, cashier of the People's Bank of Houma, La., is interested in the proposed railroad between New Orleans, Houma and Morgan City. The promoting company has been conferring with the town authorities of Houma to secure right of way.

Nashville, Tenn.—The Davidson county court has granted a franchise to L. H. Davis and others to construct an electric line in the suburbs and along several of the county roads.

Newcastle, Va.—Z. T. Kale, who is interested in a proposed railroad between Newcastle and Roanoke, informs the Manufacturers' Record that several business men of Roanoke are discussing the feasibility of the project. It is proposed to build between Roanoke, Newcastle and Ripplemead.

Norfolk, Va.—The Norfolk, Portsmouth & Newport News Railway Co. has nearly completed surveys for its proposed extension to Suffolk, Va. Virginius Cassell of Norfolk is engineer in charge. It is proposed to build the line also to a point on Hampton Roads opposite Newport News.

Paragould, Ark.—The Black & Cache River Railroad is under construction between Sedgwick and Paragould, an estimated distance of thirty miles. The Kansas City & Southern Lumber Co., which is building the line, proposes constructing also between Gage and Newport, a distance of twenty miles. H. H. Culver at Sedgwick, Ark., is general manager.

Pineville, W. Va.—The Guyandotte Valley Railroad Co., it is stated, proposes completing the line from Barboursville to Pineville during the present year. The estimated distance is 100 miles. J. L. Caldwell, president of the company, at Huntington, W. Va., may be addressed.

Register, Ga.—The Perkins Lumber Co. has completed its road between Hagin and Register, a distance of eighteen miles. The total length of the line is forty miles, extending between Glennville and Hagin.

Rogersville, Tenn.—The Hawkins county court has given a franchise to W. T. Goffe & Co. to construct an electric railroad over certain roads in the county. Mr. Goffe is a promoter of Toronto, Ont., interested in building an electric line from Knoxville to Sevierville, Tenn.

Sheridan, Ark.—Messrs. Reaves & Cook of Little Rock, Ark., have secured a contract to build ten miles of the Pine Bluff & Western Railroad, to terminate at Sheridan.

Sistersville, W. Va.—A correspondent of the Manufacturers' Record writes that the question of building a railroad between Sistersville and Toledo, Ohio, has been agitated. J. H. McCoy of Sistersville can probably give information.

St. Joseph, La.—The business men of St. Joseph are negotiating with the Texas & Pacific Railroad Co. with a view to having its proposed extension from Tripp, Ark., south built by way of St. Joseph. L. S. Thorne of Dallas, Texas, is vice-president.

St. Paul, Va.—The latest report concerning the Powell's Mountain Mineral Railroad is to the effect that the portion of the line between St. Paul and Clinchport has been graded and surveys completed the entire distance between St. Paul and a connection with the Knoxville & Cumberland Gap Railroad. The total length of the line is estimated at ninety miles. L. M. Jarvis at Sneedville, Tenn., is one of the principal promoters.

St. Louis, Mo.—The St. Louis, Hillsboro & Southern Railroad Co. has been organized to build a line from St. Louis to Hillsboro, in Jefferson county. The estimated distance is forty miles.

Tampa, Fla.—It is reported that E. H. Chamberlain, vice-president of the Standard Pole & Tie Co., 44 Broad street, New York, and A. H. Sisson, vice-president of the Jewett Car Co. of Newark, Ohio, have become interested in the plan to build a system of electric railroads between Tampa, St. Petersburg and other towns in Florida, which is being promoted by John P. Martin of Xenia, Ohio. Surveys have been completed, and it is understood that the necessary rails and rolling stock have been contracted for.

Washington, D. C.—A bill has been introduced in Congress authorizing the proposed terminals which have been planned by the Pennsylvania Company. The terminals include a tunnel and several miles of track within the District of Columbia. W. H. Brown at Philadelphia is chief engineer.

Yazoo City, Miss.—J. C. Gray has been appointed engineer to make surveys for the proposed line between Yazoo City and Belzoni. If built, the road will probably be a branch of the Illinois Central system. David Sloan of Chicago is chief engineer.

Street Railways.

Greensboro, N. C.—The Standard Construction Co., it is reported, has secured the contract to construct an electric railroad in Greensboro and suburbs. F. R. Williamson of Flemington, N. J., is one of the officers of the company. The estimated length of the line is ten miles.

Nashville, Tenn.—The Suburban & Street Railroad Co. has been formed to build a line about three miles in length in the suburbs. Among those interested are Thomas J. Felder and L. K. Whitworth.

Rome, Ga.—It is stated that the Rome Electric Railroad Co. will probably build the proposed extension to Lindale within the next three months. The extension will be three miles in length.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Bedstead Supplies.—See "Brass."

Belting, Pulleys, etc.—See "Elevator Machinery."

Boiler and Engine.—See "Saw-mill."

Boiler and Engine.—Southern Excelsior Co., Nashville, Tenn., is in the market for second-hand 60-horse-power ordinary slide-valve engine and 70-horse-power boiler complete for same.

Boiler and Engine.—J. E. Bowen & Co., Norfolk, Va., are in the market for a 15-horse-power hoisting engine complete with boiler.

Brass.—Crescent Bed Co., Ltd., New Orleans, La., wants to communicate with manufacturers of brass for bedstead trimmings.

Brick Machinery.—Frank Orth, Matthews, Ind., is in the market for brick machinery.

Brick-works Equipment.—Wm. Minnigerode, Lynchburg, Va., wants 240 iron cars for dry-kiln, capacity about 500 brick each, gauge not important; also 24,000 feet of first-class one-inch pipe.

Bridge.—A. M. Waddell, mayor, Wilmington, N. C., will open bids January 20 for construction of steel bridge; specifications on file.

Broom-corn Dealers, etc.—See "Broom Machinery."

Broom-corn, etc.—Marion Broom Co., A. T. Short, secretary, Marion, Va., wants prices on broom-corn, etc.

Broom Machinery.—J. P. Clark, 126 South Main street, Greenville, S. C., wants to correspond with manufacturers of broom-making machinery and dealers in broom-corn, etc.

Canning Factory.—Dunn Canning & Preserving Co., Dunn, Tenn., wants to communicate with manufacturers of canning-factory supplies.

Capsule Machinery.—Hill & Morgan, Manufacturers' Record Building, Baltimore, Md., want catalogues and prices on machinery for making gelatine capsules.

Coffee-roaster.—James G. Gill, 232 Holt street, Norfolk, Va., wants to purchase a second-hand coffee-roasting outfit.

Cotton Machinery.—W. H. Dustin, Lawrenceburg, Tenn., is in market for 3000 to 4000 spindles and power, etc., complete for 4 to 16 yarns, second-hand or new.

Cotton Machinery.—J. O. Kretzschmar, Memphis, Tenn., will buy set of machinery for 12-inch batting, patent rolls and 90-inch comfort stock; sewing machines for grilling (comforts), needles four inches apart for straight stitching; sewing machines for fancy stitching on comforts.

Electric-light Plant.—Louis Cohen, Sandersville, Ga., wants to correspond with manufacturers of electric-light-plant machinery.

Electric-light Plant.—Abbeville (S. C.) Electric Light & Power Co. wants (quick delivery) 75 to 125-kilowatt, 2200-volt, 60-cycle, two-phase alternator and exciter direct-connected to compound condensing engine, with necessary switchboard, instruments, etc., for two circuits.

Electric-light Plant.—Hulen Milling Co., Pocahontas, Ark., is in the market for an electric plant of 1500 incandescent lights.

Electric-light Plant.—See "Ice Plant."

Elevator.—T. W. Mewborn & Co., Kinston, N. C., is in the market for a power elevator and gasoline engine.

Elevator Machinery.—Midlothian (Texas) Grain & Elevator Co. will want new engine, conveyors, separator, belting, pulleys, etc.

Elevator Outfit.—See "Rice Mill."

Engine.—See "Elevator."

Engine.—See "Saw-mill."

Engine.—See "Elevator Machinery."

Engravers.—M. L. Holcombe, Waynesville, N. C., wants prices and samples of work from manufacturers of plates suitable for half-tone engravings for magazine.

Excelsior Machinery.—Oldham Lumber Co., Kosciusko, Miss., wants to correspond with manufacturers of machinery for making excelsior.

Flour Mill.—Stanardsville Milling Co., Stanardsville, Va., wants addresses of manufacturers of flour-mill machinery.

Hoisting Plant.—See "Boiler and Engine."

Ice Plant.—B. F. McGrew, Pulaski, Tenn., wants to buy a five to eight-ton ice plant.

Ice Plant.—Hulen Milling Co., Pocahontas, Ark., is in the market for a five-ton ice plant.

Ice Plant.—Ivey & Gordon, Wharton, Texas, wants estimates on combination ice and electric-light plant.

Machine Tools.—Eagle Iron Works, Norfolk, Va., wants a large swing second-hand lathe that will swing between fifty and sixty inches; also a second-hand iron planer, average size used in jobbing shop.

Machine Tools.—Hardie-Tynes Foundry & Machine Co., Birmingham, Ala., is in the market for heavy engine lathe, 30 or 36-inch swing by 20-foot centers; 30x30-inch or 36-inch by 12-foot planer with two heads on the cross-rail; second-hand tools wanted.

Mattress-factory Supplies.—Raleigh Mattress Works, Raleigh, N. C., wants to buy mattress-factory supplies, such as ticking, hair, pine fiber, felt, etc.

Mining Equipment.—Nakomis Zinc Mining Co., 34 South Clark street, Dodd City, Ark., will soon be in the market for pumps, shaft-work, air compressors, etc.

Oil Mill.—Louis Cohen, Sandersville, Ga., wants to correspond with manufacturers of cottonseed-oil-mill machinery.

Peanut Machinery.—O. T. Roberts, Eufaula, Ala., wants to correspond with manufacturers of peanut parchers.

Pipe Machine.—W. H. Gibbes & Co., Columbia, S. C., are in the market for a second-hand pipe machine for power which will cut up to six or eight inches; give full description and send manufacturer's circular.

Piping.—See "Brick-works Equipment."

Printing Equipment.—De Soto Publishing Co., J. L. Jones, president, Arcadia, Fla., is

in the market for complete equipment for printing purposes.

Railway Equipment.—Texas & Louisiana Railroad Co., E. A. Frost, general manager, Lufkin, Texas, wants 35 or 40-ton locomotive.

Railway Equipment.—J. C. Steele & Sons, Statesville, N. C., want prices on new and second-hand 12 and 16-pound iron rail suitable for brickyard purposes.

Rice Mill.—Paul W. Daniels, Welsh, La., will want complete rice-mill and elevator outfit.

Roofing.—Palestine (Texas) Ice, Fuel & Gin Co. wants fireproof roofing.

Saw-mill.—J. L. Cronise, Botetourt, Va., wants 10-horse-power engine and light saw-mill; also flooring machine.

Saw-mill, etc.—D. F. Dunlop, Boxwood, Va., wants second-hand 25 to 30-horse-power return tubular boiler, 20-horse-power engine, saw-mill, light, 25-foot carriage and 50-foot shafting; wants delivered Boxwood via Danville.

Shafting.—See "Saw-mill."

Shingle Mills.—E. H. Hoffman, Front Royal, Va., wants names of firms dealing in second-hand shingle mills.

Telephone Equipment.—Arcadia Electric Light, Ice & Telephone Co., Ed. Scott, manager, Arcadia, Fla., is in the market for a 200-drop switchboard for exchange.

Water-works and Sewerage.—Earl W. Taylor, quartermaster, Fort Fremont, S. C., will receive sealed proposals (in triplicate) until February 14 for installing water and sewer system, including pumphouse, pumping machinery, tanks, distributing mains, etc.; also detached lavatory at this post. Information on application. United States reserves usual rights.

Water-works Supplies.—Board of public works, H. B. Walker, secretary, Kansas City, Mo., will open bids January 16 for furnishing four 30-inch horizontal bevel-geared hub-end valves, 100 pounds working pressure; specifications on inquiry.

Woodworking Machinery.—See "Saw-mill."

Woodworking Machinery.—W. S. Foutz, Bluefield, W. Va., wants addresses of machine manufacturers making automatic lathes for insulator pins.

Woodworking Machinery.—W. A. Andrews, Opelika, Ala., is in the market for second-hand Invincible or Milwaukee 42-inch three-drum sander; also door clamp with sash attachment.

Woodworking Machinery.—Curll & Lytle Lumber Co., No. 802 Park Building, Pittsburg, Pa., wants addresses of manufacturers of machines for making oak and other hardwood veneers.

TRADE NOTES.

Filters of All Sizes.—A recent advertisement of the Burt Manufacturing Co. gave its Cross Oil Filters a filtering capacity of from 300 to 500 gallons per day, whereas it should read from three gallons to 500 gallons per day. The Cross Oil Filters can always be depended upon to do their work thoroughly, and their filtering capacity is guaranteed.

In Good Condition.—The American Audit Co. has made an examination of the condition of the Dominion National Bank of Bristol, Va.-Tenn., and finds the accounts to be as stated by the board of directors. An examining committee reports that the assets of the bank are worth much more than the amount shown by the books, on account of the increase in value of some of the securities in which its funds are invested. It is safe to say that the bank is managed on a broad, but prudent and conservative basis, and that its remarkable prosperity is largely due to this fact.

Branching Out Abroad.—The Standard Pneumatic Tool Co. of Aurora, Ill., has organized a German branch, with office at Berlin. Mr. W. H. Tew has been appointed managing director of the branch, in connection with which extensive works are to be constructed for the production of the famous "Little Giant" pneumatic tools and appliances. Mr. Tew is well known in connection with the American Locomotive Works, also through his association with the Chicago & Northwestern Railroad. The foreign plant was found necessary in order to supply the demand for these tools in Europe.

Continually in Mind.—The idea of the Bonneville Portland Cement Co. in sending cigar cases to its patrons is an excellent one from an advertising standpoint, as the products of this company will be continually kept in mind. The Star Portland cement, which is placed on the market by this company, has been utilized for bridge work, for public buildings, etc., and has been thoroughly tested with the most satisfactory results. It might be called a perfect cement for engineers. The company will be pleased to give detailed information on application to its main offices at 604-605 Fidelity Building, Philadelphia.

Completed the Organization.—The Chicago Pneumatic Tool Co. has made the following official appointments: W. O. Duntley, vice-president and general manager; C. E. Walker, assistant general manager; Thomas Aldcorn, general sales agent; W. P. Pressinger, general manager air-compressor department; Chas. Booth, manager Chicago office; S. G. Allen, manager New York office. The gentlemen in question are well known to patrons of the companies represented by the present corporation, and it is evident that the board of directors recognize the ability and experience which have so materially contributed to the success of the former corporations.

Portable Electric Railways.—The value of portable electric railways for industrial purposes is appreciated by large manufacturers, as well as mining companies and contractors. Arthur Koppel of New York is making a specialty of constructing electric lines for industrial purposes, and is prepared to build and equip them in a remarkably short time. The firm has secured an extensive patronage abroad, as well as in the United States, and is prepared to give estimates for transportation systems to fill all requirements. At the office of the firm at 66 Broad street, New York, is an interesting model of an electric road completely equipped. Anyone interested is invited to call and inspect the model. A descriptive catalogue will also be sent on application.

Quick Work.—Although the plant of the Marine Iron Works of Chicago was completely destroyed in the fire of September 24, it has already been replaced with modern structures equipped to fill orders at short notice. The machinery installed is of the highest grade for the construction of marine engines, boilers, launches, tugboats and dredges; in fact, the company has spared no expense to procure the most improved apparatus. The company regrets that many orders were destroyed with other correspondence, but trusts that the lost inquiries will be duplicated by its patrons. It keenly feels the loss of the catalogues and other material of this kind, which will require much time and attention to replace. Meanwhile it will be pleased to hear from any patrons whose letters may not have been answered, owing to the disaster.

Will Occupy a Wide Field.—The necessity for a practical system of placing deserving projects before the public is widely recognized, consequently the organization of the National Promoting & Auditing Co. will be noted with interest. It has been organized by gentlemen of experience in developing legitimate enterprises, and will make a specialty of such promotion. It is proposed to investigate projects for capitalists and projectors, give opinions on their merits, designate the market where the securities will be most likely to meet approval, and prepare maps, specifications and other data necessary to float them out successfully. The company includes Mr. Edmund Willcox, the well-known accountant and auditor, and Mr. Howell T. Wood of the Massachusetts bar. The principal offices of the company will be at 42 Court street, Boston.

More Satisfactory Tests. — Experiments made with Ruberoid by European experts give some remarkably satisfactory results. At the Agricultural Exposition at Posen, Germany, and at the exposition at Dresden a trough made of Ruberoid was filled with water, which was allowed to entirely evaporate. The troughs were then filled and the process repeated during the entire period of the expositions. When the troughs were finally examined no trace of leakage could be found. At an experiment at Charlotten, Germany, it was demonstrated conclusively that the three-ply Ruberoid will resist a water pressure of fully sixteen "atmospheres," or about 250 pounds to the square inch. This is a pressure which even brick and mortar will not withstand. Letters from the experts which are in the possession of the Standard Paint Co. prove these facts. Any inquiries relative to Ruberoid roofing will be answered by addressing the company at 100 William street, New York.

TRADE LITERATURE.

Strength in This Union.—The E. M. Dart Manufacturing Co. of Providence, R. I., has adopted a very appropriate motto in connection with its calendar for 1902—"There's Strength in Our Union." It manufactures the celebrated Union couplings and flanges, which are in very extensive use.

Facts and Figures.—The calendar issued by the Bank of Fincastle, Va., contains some interesting figures relative to the resources of Botetourt county. The dates are printed in large and clear type, and the calendar will be appreciated by the average business man.

A Striking Combination.—The calendar issued by the India Alkali Works of Boston, advertising its Savogran cleansing powder, is printed in white, green, gold and maroon, forming a very artistic as well as striking combination of tints. Incidentally medals which it has received for its compound are reproduced as well.

Electricity for Hospitals.—Bulletin No. 208, issued by the Sprague Electric Co., 527-531 West Thirty-fourth street, New York, is of unusual interest, describing the value of the Lundell electric motors for hospital service. A very compact and economical variety of motor is manufactured especially for surgical operations, also for operating fans.

An Extensive Plant.—As lumbermen well know, the plant of the Lutcher-Moore Lumber Co. of Orange, Texas, is one of the largest in the world. Its calendar for 1902 gives an illustration showing the extent of the works, and is printed on cardboard colored to represent the famous long-leaf yellow pine, for which this company has such a reputation.

The Myers Tools.—The calendar issued by Messrs. F. E. Myers & Bro. of Ashland, Ohio, is notable for the many illustrations of its pumps and other farming machinery. The reproductions form a sort of pictorial history of the growth of this concern, and gives the farmer an idea of what it can supply. It will be mailed to any address on application to the firm.

Of Generous Size.—The calendar issued by the Marion Steam Shovel Co. of Marion, Ohio, resembles the business of this concern—it is of generous proportions, and especially desirable for large offices where it is necessary to have figures which can be seen at a distance. Incidentally the calendar proves a very effective advertisement for the company which issued it.

The Robinson Oils.—The representation of a 75-horse-power engine which has been in use for seventy years and lubricated with the Robinson oils is a feature of the calendar issued by the Wm. C. Robinson & Son Co. of Baltimore. It is a strong testimonial to the lubricating qualities of these oils. Incidentally it may be said that the company itself has been in business since 1832.

The Sterling Systems.—The latest booklet issued by the Sterling Blower & Pipe Manufacturing Co. of Hartford, Conn., notes the fact that it now has branches at New York, Boston and Greensboro, N. C. The booklet is devoted to reproductions of letters from customers, which are strong testimonials of the merits of the Sterling system for collecting dust and shavings and for automatic furnace feeding.

Handy to Have Around.—Every business man knows the time expended in filling out orders. The S. Obermayer Company of Cincinnati, Chicago and Pittsburg has issued a book of blank orders for the use of the foundry foreman and the factory purchasing agent. It avoids the necessity of writing special letters when any parts in the foundry are needed. The book will be sent to any patron on application.

Surrounded by Honors. — The design adopted by the John A. Roebling's Sons Co. of Trenton, N. J., for its calendar for 1902 is very appropriate. The company's title and advertisement are enclosed in a border illustrating the gold, silver and bronze medals which it has secured for its wire rope, etc., at the principal expositions of the world. The reproductions themselves are unusually well executed, and make a very appropriate embellishment.

Additional Specialties.—In sending out the hardware edition of its catalogue for 1902, Messrs. E. C. Atkins & Co. of Indianapolis have made several important additions to the specialties which it offers lumbermen and others. They include mill saws, band saws, cross-cut saws, hand saws, handles, topping knives and edging trowels. The catalogue is not only fully up to the standard of the previous issues, but, if anything, is superior in its illustration and typography. Complete price-lists are included.

Saves Brain-Work.—Mechanism for adding, subtracting, multiplying and dividing has reached such a stage that it is no longer experimental, but is being rapidly adopted for use in banks, mercantile establishments, factories and railroad offices. The comptometer is one of the most practical forms of this apparatus, and saves a wonderful amount of brain-work merely by manipulating the keyboard. The Felt & Tarrant Manufacturing Co., 52-56 Illinois street, Chicago, has published a booklet describing its work. As an illustration of its rapidity the comptometer will multiply 614 by 342 in four seconds if an ordinary operator is working it. An expert operator can perform the same example in less than three seconds, as has been demonstrated by actual test. At present nearly all of the arithmetical work done by the Bureau of Construction and Repair of the Navy Department is performed by the sixty-two comptometers which are installed in this department. The company offers to send a machine on sixty days' trial, and will be pleased to give additional information if addressed as above.

A Necessity to the Farmer.—One of the hardships of agriculture is the work of clearing. Every farmer who has taken up a tract of forest land or "new ground" realizes the time and labor required to get rid of the tree stumps. Sometimes he builds a fire and tries to burn them out, but the roots remain. In recent years dynamite and other explosives have been used, but with only partial success, and the only proper remedy seems to be to pull them out by main force. The farmer and his "help" sometimes spend a day in getting rid of one stump which may not take up more than three or four feet of ground. These are cases where the Hawk-eye grub and stump machine is not used. Those who have been so fortunate as to get the benefit of this apparatus know what it accomplishes as a time and labor saver; in fact, the farming community can consider the Milne Manufacturing Co. as a public benefactor in manufacturing and placing on the market such a practical and valuable device. The stump-puller, which is advertised and illustrated in another column, is so simple in arrangement that it can actually be operated successfully by the power of two horses, and has a record of pulling a stump in less than a minute. It is manufactured to be used by one or more horses, according to the work required, and has the reputation of never failing. Milne's wire-rope coupler is used on the apparatus, and the results accomplished are really astonishing. In clearing right of way for railroads the machine is especially desirable. The manufacturer will be pleased to send a catalogue containing full details as well as many testimonials from those who have used the mechanism, by addressing it at Monmouth, Ill.

Mexico and California—45 Days' Tour via Pennsylvania Railroad.

The Pennsylvania Railroad personally-conducted tour to Mexico and California, which leaves New York and Philadelphia on February 11 by special Pullman train, covers a large and intensely-interesting portion of North America, embracing a great part of Mexico, the beautiful coast resorts of California, and on the return journey from California, the Grand Canon of Arizona, one of the great wonders of the country. Fourteen days will be spent in Mexico and nineteen in California. The Mexico and California Special, to be used over the entire trip, will be composed of the highest-grade Pullman parlor, smoking, dining, drawing-room, sleeping, compartment and observation cars, heated by steam and lighted by electricity. Round-trip rate, covering all necessary expenses during the entire trip, $575 from all points on the Pennsylvania Railroad system east of Pittsburg, and $570 from Pittsburg. For the tour of Mexico only the rate will be $350, and for California only, which will leave February 25, $375. For itinerary and full information apply to ticket agents, or address George W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia. †

Florida—Two Weeks' Tour via Pennsylvania Railroad.

The first Pennsylvania Railroad tour of the season to Jacksonville, allowing two weeks in Florida, will leave New York, Philadelphia, Baltimore and Washington by special train on February 4.

Excursion tickets, including railway transportation, Pullman accommodations (one berth) and meals en route in both directions while traveling on the special train, will be sold at the following rates: New York, $50; Philadelphia, Harrisburg, Baltimore and Washington, $48; Pittsburg, $53, and at proportionate rates from other points.

For tickets, itineraries and other information apply to ticket agents, or to Geo. W. Boyd, assistant general passenger agent, Broad Street Station, Philadelphia.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Assets Well Secured.

The annual statement of the Fidelity & Deposit Co. of Maryland, detailed in another column, will be found of unusual interest. One of the features of the report is the description of the securities, which comprise the resources of the company. It will be found that these consist largely of State, county and municipal bonds, also approved railroad securities, most of which have been steadily enhancing in value within the last few years. The company's holdings of Baltimore city stock alone aggregate $1,258,000, while it also owns $200,000 in bonds of the city of New York and $150,000 in bonds of the Consolidated Gas Co. of Baltimore. The total resources on December 31 amounted to $5,692,000, while a surplus of $2,500,000 was shown, although its capital stock is but $2,000,000. The item of undivided profits alone amounted to $278,850. The company claims to have the largest net surplus of any surety company in the world. As an indication of the conservative policy pursued by the management, it declined last year business amounting to $200,000, believing the risks to be of an undesirable character.

New Corporations.

W. L. Thomas of Plains, Ga., has organized a bank in that town with $25,000 capital stock.

The De Soto Building & Loan Co. has been organized at New Orleans by Henry Beer and others.

C. H. Jennings has been elected president of the First National Bank, recently organized at Grantsville, Md.

W. E. Bailey is interested in the organization of a national bank at Emporia, Va., with $25,000 capital stock.

H. K. Ricker is one of the incorporators of the El Reno Loan & Trust Co. of El Reno, Okla., capitalized at $10,000.

A charter has been issued to the Citizens' Bank of Marshall, Okla., in which R. M. Kincaid and others are interested.

The promoters of the new bank at Selma, N. C., have elected M. C. Winston, president, and R. B. Whitley, vice-president.

The Equity Savings & Loan Co. has been organized at New Orleans by H. W. Heymann and others, with $20,000 capital stock.

Arrangements have been made to open another bank at Lexington, Miss., with $50,000 capital stock, by W. W. Mayfield and others.

Iowa parties have become interested in the organization of a national bank at Cleburne, Texas., which will have $100,000 capital stock.

Jacob C. Fames is interested in the Farmers and Merchants' Bank of Hydro, Okla., which was recently organized with $5000 capital stock.

Geo. W. Gillespie has been elected president, and W. T. Gillespie, cashier, of the Tazewell National Bank, recently organized at Tazewell, Va.

The Park Building and Loan Association has been incorporated at Baltimore by Francis M. Miller and others, with $650,000 capital stock.

The Baldwin County Bank, recently organized at Bay Minette, Ala., began business January 1 with J. D. Hand, president, and W. D. Stapleton, cashier.

The Bank of May's Lick has been organzed at the town of this name in Kentucky with $17,500 capital stock. Among those interested are S. M. Roff and M. H. Davis.

L. S. Woodfin of Shreveport, La., is interested in the First National Bank, which has been organized at Jasper, Texas, with $25,000 capital stock.

The Paducah Trust Co., organized at Paducah, Ky., with $150,000 capital stock, has secured a site for its office. E. W. Smith has been elected president.

The Piedmont Mutual Insurance Co. has been chartered to begin business at Spartanburg, S. C., with $50,000 capital stock. A. M. Alexander is one of those interested.

D. M. Bernard and C. F. Baird are interested in an investment company being formed at El Paso, Texas. It is reported that English capitalists will be associated with them.

W. D. Mayfield has been elected president; W. J. Walker, Jr., vice-president, and N. D. Walker, treasurer, of the Acme Loan & Real Estate Co. of Columbia, S. C., which has recently been organized.

The American Savings Bank & Trust Co., recently organized at Memphis, Tenn., with $50,000 capital stock, has opened for business with A. Goodman, president, and D. M. Armstrong, cashier.

John H. Carter has been elected president; F. E. Conley and A. S. J. Davis, vice-presidents, of the North Georgia National Bank, which has begun business at Blue Ridge, Ga., with $40,000 capital stock.

The Eastern Securities Co., recently organized by Baltimore capitalists with $250,000 capital stock, has elected Nelson Perin, president; Daniel E. Conklin and N. Winslow Williams, vice-presidents, and Donnell Swann, secretary and treasurer.

A dispatch from Columbia, S. C., states that arrangements are being made to organize a company in that city with $250,000 capital stock. Local parties reported as interested are Wm. H. Lyles and Julius H. Walker. It is also stated that John Skelton Williams of Richmond and J. W. Middendorf of Baltimore are to be included in the directory.

New Securities.

The city of Huntsville, Ala., has sold its bond issue of $40,000 at a premium of $2250.

The Bank of New Martinsville, W. Va., has decided to increase its capital stock to $60,000.

The city of Huntsville, Ala., has decided to sell $40,000 in bonds for improvements. Address the mayor.

John W. Dickey of Augusta, Ga., has purchased $20,000 in 5 per cent. bonds of Darlington, S. C., paying 102.651.

The Hancock County Bank of Bay St. Louis, Miss., has decided to increase its capital stock to the extent of $15,000.

The town of Takoma Park, Md., has sold $10,000 in 4 per cent. improvement bonds to the Washington Loan & Trust Co. at par.

Oconee county, Georgia, will issue bonds to the extent of $8000. The board of commissioners may be addressed at Watkinsville, Ga.

The issue of $4000 in 6 per cent. bonds of Chase City, Va., remains unsold, and will probably be again placed on the market in the near future.

The city of Macon, Ga., will vote February 11 on the proposal to issue $964,800 in 4 per cent. bonds for refunding purposes. Address the mayor.

The issue of $27,000 in 5 per cent. bonds of Houma, La., remains unsold, and will probably be again offered investors in the near future. Address the mayor.

The county court of Greene county, Tennessee, is considering the issue of $400,000 in bonds for road improvements. It may be addressed at Greeneville, Tenn.

The Lloyd L. Jackson Company of Baltimore has given a mortgage to the Mercantile Trust & Deposit Co. of Baltimore to secure $200,000 in 4½ per cent. bonds.

An election will be held at Roanoke, Va., on February 20 to decide the question of issuing $25,000 in improvement bonds. The mayor will give further particulars.

The town of Dyersburg, Tenn., will probably place on the market the issue of $50,000 in 4 per cent. bonds decided upon at the recent election. The mayor may be addressed.

Brown county, Texas, has voted in favor of isuing $30,000 in 4 per cent. bonds for improvements. The board of commissioners may be addressed at Brownwood, Texas.

It is probable that the issue of $40,000 in improvement bonds recently voted upon by the town of Biloxi, Miss., will be placed on the market in the near future. The mayor may be addressed.

The water board of Baltimore will probably place on the market an issue of $1,000,000 in bonds for the construction of a reservoir if authority is given by the State legislature. The mayor may be addressed.

Financial Notes.

The Petersburg Loan Co. of Petersburg, Va., has decided to change its name to the Appomattox Trust Co.

Arrangements have been made to consolidate the Loan and Exchange Bank and the Central National Bank of Columbia, S. C. The consolidated institution will be known as the Loan and Exchange National Bank.

A dispatch from Richmond, Va., announces that a syndicate headed by W. B. Tennant has secured control of the Metropolitan Bank in that city, and the title has been changed to the Metropolitan Bank of Virginia. The capital stock has been increased to $300,000.

It is officially announced that the Continental National Bank of Baltimore has been merged with the National Bank of Commerce, and its business assumed by the latter institution, of which Mr. Eugene Levering of Baltimore is president. The National Bank of Commerce is capitalized at $300,000.

The Columbia Title Insurance Co. and the Real Estate Title Insurance Co. of Washington are considering the idea of a consolidation by increasing the capital stock of the Columbia Company to $1,000,000 and absorbing the Real Estate Company. A committee has been appointed to carry out the plans.

The annual report of the Richmond Trust & Savings Deposit Co. of Richmond, Va., shows a very prosperous condition of affairs. Although the capital stock is but $1,000,000, it has already acqured a surplus and profits of $613,000, while its last quarterly dividend amounted to $10,000. The item of investment, bonds, stocks in the report alone aggregated $1,328,000. Mr. John Skelton Williams is president; James H. Dooley and Henry I. Cable, vice-presidents, and L. D. Cranshaw, Jr., treasurer.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending January 14.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	...	91
Aiken Mfg. Co. (S. C.)	89	94
American Spinning Co. (S. C.)	...	105
Anderson Cotton Mills (S. C.)	...	127½
Arkwright Mills (S. C.)	105	...
Augusta Factory (Ga.)	...	75
Avondale Mills (Ala.)	82½	...
Belton Mills (S. C.)	...	101½
Bennettsville Mfg. Co. (S. C.)	...	95
Cabarrus Cotton Mills (N. C.)	125	...
Clifton Mfg. Co. (S. C.)	174	182
Clinton Cotton Mills (S. C.)	117	...
Courtenay Mfg. Co. (S. C.)	...	120
Dallas Mfg. Co. (Ala.)	...	95
Darlington Mfg. Co. (S. C.)	84	...
Eagle & Phenix Mills (Ga.)	100	...
Enoree Mfg. Co. (S. C.)	...	100
Enterprise Mfg. Co. (S. C.)	95	100
Gaffney Mfg. Co. (S. C.)	...	106
Granby Cotton Mills (S. C.)	...	99
Granby Cotton Mills (S. C.) 1st Pfd.	...	101½
Graniteville Mfg. Co. (S. C.)	160	...
Greenwood Cotton Mills (S. C.)	98	...
Grendel Mills (S. C.)	100	102½
Henrietta Mills (N. C.)	...	201
King, John P., Mfg. Co. (S. C.)	95	98
Langley Mfg. Co. (S. C.)	110	...
Laurens Cotton Mills (S. C.)	140	147
Lockhart Mills (S. C.)	...	109
Louise Mills (N. C.)	...	100
Lynchburg Cotton Mills (Va.)	125	130
Lynchburg Cotton Mills (Va.) Pfd.	145	150
Manchester Cotton Mills (S. C.)	...	110
Mayo Mills (N. C.)	150	...
McColl Mfg. Co. (S. C.)	...	103½
Newberry Cotton Mills (S. C.)	112	...
Odell Mfg. Co. (N. C.)	96	...
Orr Cotton Mills (S. C.)	...	102½
Pacolet Mfg. Co. (S. C.)	185	195
Pelzer Mfg. Co. (S. C.)	170	180
Piedmont Mfg. Co. (S. C.)	...	180
Poe, R. W., Mfg. Co. (S. C.)	120	125
Richland Cotton Mills (S. C.)	...	102
Richland Cotton Mills (S. C.) Pfd.	...	100½
Roanoke Mills (N. C.)	90	100
Sibley Mfg. Co. (Ga.)	...	74
Southern Cotton Mills (N. C.)	100	105
Spartan Mills (S. C.)	125	135
Trion Mfg. Co. (S. C.)	120	...
Tucapau Mills (S. C.)	125	...
Union Cotton Mills (S. C.)	...	135
Union Cotton Mills (S. C.) Pfd.	100½	104
Victor Mfg. Co. (S. C.)	107	...
Warren Mfg. Co. (S. C.)	95	100
Warren Mfg. Co. (S. C.) Pfd.	103	...
Washington Mills (Va.) Pfd.	100½	102½
Whitney Mfg. Co. (S. C.)	...	120
Wilmington Cot. Mills (N. C.) Pfd.	100	105
Wiscassett Mills (N. C.)	112	...

The Savannah Cotton Exchange has endorsed the movement for the establishment in that city of a United States subtreasury.

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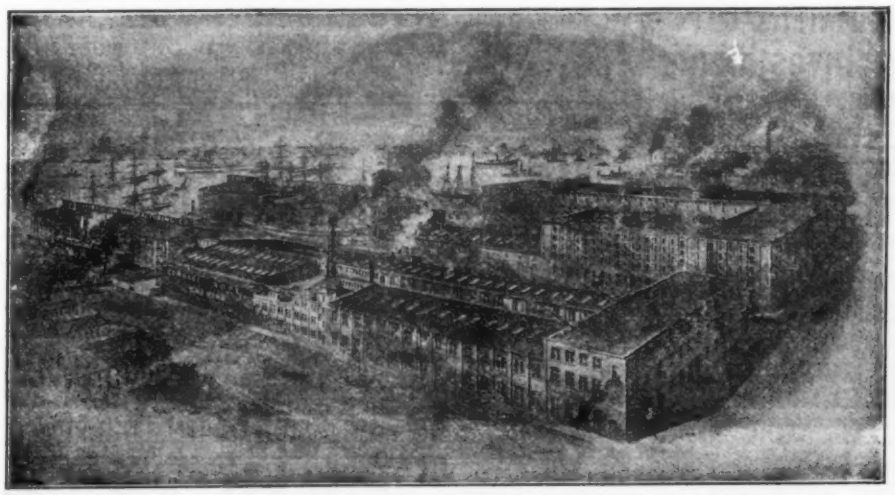

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PROPOSALS.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., January 6, 1902.—Notice is hereby given that the time for opening the bids for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Court House, Post Office and Custom House building at Tampa, Florida, has been extended from February 3, 1902, to February 15, 1902. JAMES KNOX TAYLOR, Supervising Architect.

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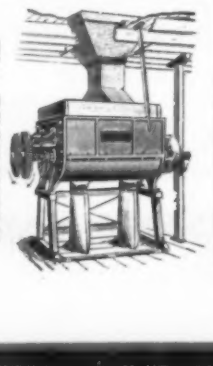

STATEMENT
OF THE
FINANCIAL CONDITION
OF THE
Fidelity and Deposit Co. of Maryland,

AT THE CLOSE OF BUSINESS, DECEMBER 31, 1901.

Par value.	RESOURCES.	Book value.
	Real Estate (Fidelity Building)	$600,000 00
$125,000	State of Georgia 4½ per cent. Bonds, 1911-1912-1916	140,000 00
100,000	State of Maryland 3½ per cent. Bonds	105,000 00
30,000	State of Tennessee 3 per cent. Bonds	28,500 00
1,120,000	Baltimore City Stock, 1928-1930-1936-1940-1945	1,258,360 00
200,000	City of New York 3½ per cent. Export Dock Gold Bonds	218,000 00
50,000	City of Buffalo (N. Y.) 3½ per cent. Bonds	51,500 00
25,000	City of Mobile (Ala.) 4½ per cent. Bonds	27,000 00
10,000	City of Norfolk (Va.) 5 per cent. Bonds	11,200 00
21,000	City of Westminster (Md.) 3½ per cent. Bonds	21,000 00
39,500	City of Frederick (Md.) 4 per cent. Bonds	41,080 00
10,500	City of Rockville (Md.) 4 per cent. Bonds	10,500 00
25,000	City of Petersburg (Va.) 5 per cent. Bonds	27,500 00
25,000	City of Richmond (Va.) 4 per cent. Bonds	26,000 00
25,000	City of Havana (Cuba) 6 per cent. Bonds	25,500 00
18,000	Hyattsville (Md.) Water-Works Bonds (4 per cent.)	18,595 00
30,000	Lucas County (Ohio) 4 per cent. Courthouse Bonds	34,050 00
30,000	Montgomery County (Alabama) 5 per cent. Bonds	33,300 00
500,000	United Railways & Electric Co. of Baltimore 4 per cent. Bonds	475,000 00
100,000	Baltimore Traction Co. (N. Balto. Div.) 5 per cent. Bonds	120,000 00
48,000	City & Suburban Railway Co. of Baltimore 5 per cent. Bonds	54,480 00
35,000	Lake Roland Elevated Railroad of Baltimore 5 per cent. Bonds	42,000 00
25,000	Charleston City Railway Co. 5 per cent. Bonds	25,875 00
10,000	Baltimore, Catonsville & Ellicott Mills Railway 5 per cent. Bonds	11,880 00
25,000	Atlanta (Ga.) Consolidated Street Railways 5 per cent. Bonds	26,250 00
10,000	Second Avenue Traction Co. (Pittsburg, Pa.) 5 per cent. Bonds	11,500 00
532,500	Monongahela River Railroad and other 5 per cent. Car Trust Bonds	532,500 00
100,000	Charleston & Western Carolina Railroad 5 per cent. Bonds	108,000 00
103,500	Baltimore & Ohio S. W. Division 1st 3½ per cent. Bonds	91,080 00
50,000	Atchison, Topeka & Santa Fe R. R. 1st Mort. 4 per cent. Gold Bonds	51,000 00
50,000	Wilmington & Weldon Railroad 5 per cent. Bonds	59,500 00
30,000	Raleigh & Gaston Railroad 5 per cent. Bonds	33,600 00
11,000	Georgia Pacific Railroad 6 per cent. Bonds	13,750 00
10,000	Petersburg Railroad 6 per cent. Bonds (Class B)	13,050 00
11,000	Virginia Midland 1st Mortgage 6 per cent. Bonds	11,770 00
30,000	Virginia Midland 2d Mortgage 6 per cent. Bonds	34,800 00
150,000	Consolidated Gas Co. of Baltimore 5 per cent. Bonds	168,000 00
12,400	310 shares Farmers and Merchants' National Bank Stock of Baltimore	20,615 00
11,000	110 shares National Union Bank Stock of Baltimore	12,980 00
15,250	1525 shares National Mechanics' Bank Stock of Baltimore	45,750 00
200,000	Georgia & Alabama 1st Consolidated Mortgage 5s	216,000 00
100,000	United States Government 3s	108,000 00
£53,675	British Consols	244,718 00
$12,000	St. Michaels (Md.) 4 per cent. Water-Works Bonds	12,060 00
	Agents' Debit Balances (less commission)	73,913 23
	Premiums in course of collection (Home Office)	8,993 76
	Cash in Office and Banks	387,644 06
	Total	$5,691,794 05

LIABILITIES.	
Capital Stock	$2,000,000 00
Surplus	2,500,000 00
Premium Reserve Requirement	704,698 55
Claims Adjusted (Checks out)	966 87
Claims Admitted (in process of adjustment)	46,178 43
Claims reported, but proof not filed, etc	26,843 14
Claims not admitted	134,256 40
Undivided Profits	278,850 66
Total	$5,691,794 05

(Good Assets not included in above over $100,000.)

. . . FACTS . . .

THE FIDELITY & DEPOSIT CO. OF MARYLAND has paid to its patrons since organization for losses incurred by dishonesty, embezzlement, etc., $1,909,241.

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It has the largest PREMIUM RESERVE of any Surety Company in the world.

It has the SMALLEST amount of Outstanding Premiums in proportion to the premiums written of any Surety Company in the world.

It declined during 1901 to write or renew business amounting to over $200,000 in premiums because of inadequate rates and undesirable character of risks.

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26″x24″x6′ New Haven.
24″x24″x5′ Powell.
15″x15″x3′ Garvin.

SHAPERS.
15″ Hendey, swinging table and vise.
10″ New Haven.
14″ traverse head, crank shaper.

DRILLS.
20″ upright. 22″ upright.
25″ Blaisdell, upright.
40″ New Haven, upright.

MILLING MACHINES.
No. 4 Lodge & Davis Universal.
No. 1 Brainard.
No. 7 Brainard, plain.

SQUARING SHEARS.
26″ power.
22″ foot power.

TURRET LATHES.
18½″x6′ cabinet, engine feed.
20″x7′ cabinet, engine feed.

One Warner & Swassey Reamer Grinder.

U. BAIRD MACHINERY CO.
123-128 Water St., PITTSBURG, PA.

SECOND-HAND

Rope Transmission Rig

CONSISTING OF

1 22 foot Grooved Wheel, 73″ face with 22 grooves for 2¼″ rope. The shaft is 20″ diameter in wheel, 18″ in bearings and has clutch coupling on end.

2 heavy Pillow Blocks with 30″ bearing.

1 54″ Grooved Wheel, 73″ face, with 22 grooves for 2¼″ rope; bore 10½″.

All parts are heavy, well proportioned and in the best of condition.

WICKES BROS.
45th St. and A. V. R. R.
PITTSBURG, PA.

FOR SALE.

Plant of Wood-Working Machinery,

Consisting of one gas and gasoline engine, one heavy planer, one jointer, one shaper, one sand wheel, one small lathe, one large lathe, one band saw machine, one combination machine, one foot mortiser, one small boring machine, one large boring machine, one saw table, one resaw, one dovetail head, one large gluing frame, including all tools, shafting, pulleys and belts. (Cost $3,000.) All offers for above will be treated strictly confidential, and preference given in order received until January 25, 1902.

G. T. BUNTING'S,
66 N. Charlotte Street. ST. AUGUSTINE, FLA.

Second-hand Dynamos, Motors and Electrical Appliances. All money savers. Repair anything. Have you a Dynamo or Motor for sale?

GUARANTEE ELECTRIC CO.
133-139 S. Clinton St. CHICAGO.

FOR SALE.

The Machinery of First-Class Cotton Mill,

Now in operation. Address
M. S., care Mfrs. Record.

FOR SALE.

SECOND-HAND BOILER ROLLS

in good condition, 10′ 6″ between housings; will roll one-half inch plate.

E. KEELER CO., Williamsport, Pa.

For Sale Cheap.

Two style "H" Gates Crushers. One set 36x15 Gates Rolls with R. S. shells and automatic feeder. One 19x9 Gates-Blake Crusher. One Max F. Abbe 36x15 in., continuous feed and delivery tube mill, wedgewood lined, on wood frame.

CHICAGO PORTLAND CEMENT CO.
513 Chicago Stock Exchange Bldg., Chicago, Ill.

FEED-WATER HEATERS

2nd-Hand 80, 160 and 250 h. p. Berrymans, 200 h.p. Goubert, 150 and 600 h.p. Wainwrights, 500 h.p. National, 600 h.p. Stillwell-Bierce Open Heater. All guaranteed. F. L. PATTERSON, Havemeyer Bld'g, N. Y.

ICE MACHINES

FOR SALE.

Six 75-ton Ice Machines,
Vertical compression type, complete in every way.

We purchased them from Armour & Co., Chicago.

They were discarded owing to the necessity for increase of power and for no other reason. They are in excellent condition, and we are now engaged in removing them from their Chicago Stock Yards Plant. They can be inspected, and two of them are still in use. This is an excellent opportunity and will make exceedingly alluring propositions to purchasers.

Full description and information will be furnished on application.

LOCOMOTIVE.

One Rogers Locomotive, standard gauge, 30 ton.

Chicago House Wrecking Co.
W. 35th and Iron Streets,
CHICAGO.

SPECIAL BARGAINS.

LATHES.
79″ Sellers axle lathe.
76″x20′ Farrel, C. R., triple-geared, worm drive.
60″x20′ Wilmarth, triple-geared.
18′ swing pit lathe, very heavy.
49x14 Fitchburg, plain turning.
44x26 Fifield, triple-geared, new.
38x22 Fish, triple-geared, new.
32x12 Reed, C. R. & P. C. F., A1.
26x10 New Haven, C. R. & P. C. F.
25x21 Harrington, C. R. and taper.
21x10 Wright, R. & F., P. C. F.

PLANERS.
19′x6″ plate planer. 36x36x8 Sellers, 2 heads.
36x36x8 Flather, 2 heads, new.
30x24x7 Freeland, 1 head.
27x32x8 Fitchburg, 1 head, good.
27x27x6 Whitcomb, 1 head, A1.
22x22x4 New Haven, 1 head, A1.

SHAPERS.
28″ Smith & Mills, geared. 26″ ditto.
22″ Prentiss friction, new. 26″ ditto.
15″ Putnam friction, good as new.
15″ Prentiss friction. 12″ Warren trav. hd
12″ Prentiss crank.

SCREW MACHINES.
2″ Cleveland automatic, A1.
No. 3 Pratt & Whitney automatic.
1″, ⅞″ and ⅝″ Brown & Sharpe automatic.
5-16″ Hartford automatic.
No. 2½, No. 2, No. 1 and No. 0 Pratt & W. hand.
No. 2½ Garvin double turret.

DRILLS.
3, 4, 5 and 6′ Bickford radials, new.
4′ Betts radial. 4′ Cincinnati radial, new
3 36″ Column drills, very heavy.
2 25″ Gould & E. uprights, B. G. & P. F.
2-spdl. Slate, sensitive.
1-spdl. Slate, sensitive.

MILLERS.
No. 4, No. 3 and No. 1 Brown & Sharpe plain, with oil pumps, A1.

MISCELLANEOUS.
Double-end Kent punch and shear.
20′ hydraulic keel bending rolls.
200-ton hydraulic vertical press.
350-lb. Merrill frict. board drop hammer.
600-lb., 800-lb., 1000-lb., 1400-lb. and 1700-lb. ditto.
No. 69 Bliss drawing press.
125-lb. Merrill air hammer.
No. 2 Brown & Sharpe univ. grinder.
No. 2 Brown & Sharpe surface grinder.
No. 3 Brown & Sharpe tool grinder.
No. 3 Cincinnati univ. miller, no hds.
No. 15 Brown & Sharpe plain miller.
No. 6 Brainard heavy Lincoln pattern miller.
No. 2 Pratt & Whitney hand miller.
Ames & Pratt & Whitney Lincoln pattern.
50″ Bickford vert. boring mill.

Also large stock of new and second-hand tools. Send for list.

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STANDARD AIR COMPRESSORS

FOR IMMEDIATE DELIVERY.

One Ingersoll Sergeant, class G, steam driven, Compound Duplex, piston inlet, capacity 2230 cubic feet free air per minute. One Duplex Ingersoll Sergeant Class G. Steam Driven, piston inlet, capacity 1618 cubic feet free air per minute, guaranteed.

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FOR QUICK DELIVERY.

18", 22", 24", 26", 28", 30", 32" and 36" Lathes. Any length.

SCHUMACHER & BOYE,
Cincinnati, O.

SECOND-HAND WOOD-WORKING MACHINERY

FOR SALE CHEAP

Send for our new list of PLANING MILL and FURNITURE MACHINERY. We send photograph of everything.

PRICE MACHINERY CO.,
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ALWAYS POSITIVE BARGAINS IN

White & Middleton Gas Engines.

All Sizes and Guaranteed as Represented.

Large line of Steam Engines, Boilers and Pumps, all sizes; 6-H.-P. Hoisting Engine, 8-H.-P. Portable Engine and Boiler, 175-Light (nearly new) C. & C. Dynamo, 2 Rev. and Drum Cylinder and Job Printing Presses, Shafting, Hangers, Pulleys and Forge, Wire Belt Fastener, ¼-H.-P. Water-Motor, complete Stereotype outfit, complete Plants and Machinery of all kinds bought, sold and exchanged.

MENGEL'S MACHINERY EXCHANGE,
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John A. Waters & Co.

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New and Second-Hand Boilers, Engines, Mining Outfits and General Machinery.

3 100 H. P. Return Tubular Boilers, made by the Penn. Boiler Works (new, never having been in brick work) with stack and breeching complete.
2 65 H. P. Return Tubular Boilers, very fine. A No. 1 condition.
1 7x10 Double Cylinder and Double Drum **Hoisting Engine,** in A No. 1 condition, having been used but very little.
1 4x6 Double Cylinder and Single Drum **Hoisting Engine,** as good as new, only used a few weeks. Both of these Hoisting Engines have been thoroughly overhauled in our plant.

FOR SALE.

SHEARS

5 pairs of Alligator Shears, for cutting hoop bands and light iron, belt driven, good order.

1 RE-SQUARING SHEAR for light sheets.

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1 3-sided Planer and Matcher, Frank, $175. 1 38" Connell & Dengler Circular Re-saw, $1,25. 1 42" 3-roll Egan Sander, $400. 1 36" Single Drum Sander, $45. 2 20" Pony Planers, each, $65. 1 24" Single Surfacer, $100. 4 Engines. 2 Boilers.
Write for complete list.

Cleveland Belting & Machinery Co.
CLEVELAND, OHIO.

FOR SALE.—Band Saw, Scroll Saw, 7" and 14" Floorers, Circular Re-Saw, E. B. Surfacers, Stationary Bed Planers, Planers and Matchers, Du Four Picket Header, Shapers, Moulders, Aut. Knife Grinder, "Doig" 8 Tube Aut. Nailer, Blind Slat Tenoner, Blind Stile Mortiser and Borer, Knife Balance, Swing Saw, Lathes, Shaving Fans. Cash buyers for new or re-manufactured wood-working machinery, can save money by writing to
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Iron Tools and Woodworking Machinery

Corliss and Double Valve Engines for Trolley Roads and Electric Lighting Stations.

H. C. BAKER & CO.,
114 N. 3d Street, Philadelphia, Pa.

Engine Bargains

100 h. p. 12x24 Buckeye Automatic.
100 h. p. 12x20 Rice Automatic.
150 h. p. 14x30 Cummer 4 valve Automatic.
250 h. p. 12x22x18 Payne Tandem Cpd. Auto.
130 h. p. 14x28 Buckeye Automatic.
60 h. p. 10x12 Ball High Speed.
40 h. p. double cylinder 6x8 Marine.
50 h. p. 12x18 Slide Valve.
200 h. p. Baragwanath Heater.
45 h. p. 11¼x18 Slide Valve.
60x16 ft. Tubular Boiler.
200 h. p. Stillwell-Bierce Heater.

The above are all in first-class condition and ready for shipment. Will buy, sell or exchange.

A. L. DAWSON & CO.,
27-31 W. Washington St., CHICAGO, ILL.

Largest Stock of Engines, Boilers, Dynamos and General Machinery. Rebuilt and Guaranteed. Immediate Delivery.

1 28"x48" Green Automatic. 1 16¼"—32"x36" Cross Compound Fitchburg Automatic. 1 13"—20"x16" McEwen Automatic. 1 22"x32" Watertown Automatic. 2 20"x42" Green Automatics. 2 17"x30" Williams Automatics. 1 15¾"x16" New York Safety Automatic. 1 15"x12" Harris Corliss. 1 14"—27"x14" Westinghouse Compound 2 15¾"x15" Armington & Sims Automatic. 2 14¾"x18" Beck Automatic. 1 14"x16" McEwen Automatic. 1 13"x14" Vertical Fitchburg Automatic. 1 10"-18"x12" Ball Tandem Compound. 2 12"x18" Russell Automatics. 2 13"x12" Ball Automatics. 1 10"x16" Buckeye Automatic. 1 9"x9" New York Safety Automatic. 2 80 H. P. Westinghouse Compounds. 5 75 H. P. Westinghouse Standard Automatics. 2 65 H. P. Westinghouse Compounds Also a great many others, all types.
Send for special list.

BOILERS—2 300 H. P. Climax Vertical Water Tube Boilers. 2 280 H P. B. & W. Water Tube Boilers, 200 lbs. steam pressure. 1 300 H. P. A. & R. Water Tube Boil r, 165 lbs. steam pressure 2 100 H. P National Water Tube Boilers. 5 66"x18' Horizontal Tubular Boilers, 125 lbs. steam pressure. 3 66"x18' Horizontal Tubular Boilers, with Hawley down draft 3 66"x16' Horizontal Tubular Boilers, 125 lbs. steam pressure. 2 66"x16' Horizontal Tubular Boilers, 100 lbs. steam pressure. 4 54"x16' Horizontal Tubular Boilers, 100 lbs. steam pressure. 2 48"x14' Horizontal Tubular Boilers, 100 lbs. steam pressure.

Several full Railway and Electric Lighting Equipments. Large stock of Machine Tools. Also a large assortment of New Machinery for immediate delivery—Lathes, Planers, Shapers, Drill Presses, Milling Machines, Dynamos, Motors, Gas and Gasoline Engines, Steam and Centrifugal Pumps, Contractors' and General Supplies. Write for special catalogue and prices.

FRANK TOOMEY,
127-131 N. Third Street, PHILADELPHIA, PA.
Long Distance Telephone 261-262.

MACHINERY BARGAINS.

Automatic Engines—1 13"x14" self-contained, Chandler & Taylor. 1 12"x16" centre crank, Erie City Iron Works.
Horizontal Engines—Cylinders 16"x24", 12"x20", 9"x12", 7"x14."
Portable Engines—1 25 H. P. on skids; engine mounted on boiler.
Vertical Engine and Boiler—1 8 H. P. engine and 10 H. P. boiler combined, on one base; boiler has submerged tubes.
Stationary Boilers—1 60"x19', 20 6" flues; 1 48"x16', 40 3¼" flues.
Vertical Boiler—1 10 H. P. one-flue boiler, in excellent condition. 2 10 H. P., submerged tubes.
Steam Pumps—Single and duplex, all sizes.
Grist Mill—1 24" under runner geared mill, iron frame, good as new.
Correspondence solicited.

CHAS. F. TRAMPE,
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FOR SALE.

Wood and Iron Working Machinery,

New and Second-hand.

If in the market for machinery, send for our descriptive price list.

LOUIS E. RECHTIN & BRO., Cincinnati, O.

PLATE BENDING ROLLS

FOR SALE.

One pair Hilles & Jones Plate Bending Rolls, 92" between housings, top roll 8 3-16" diameter, bottom rolls 7 3-16", in good condition and cheap.

CHAS. T. LEHMAN,
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FOR SALE.

A large number of Chapman high pressure steam valves, ranging in sizes from 4" to 14", in A1 condition at half price.

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The Best Equipped **Spool and Bobbin Outfit** in the South. Machinery is all new and modern. Inability to devote time to business the only reason for selling. Correspondence Solicited. Address "BOBBINS," care Manufacturers' Record.

2D-HAND BERRYMAN HEATERS,

all sizes. Taken in trade for our Improved Berryman. In perfect order. Tested and guaranteed. Prices reasonable. BENJ. F. KELLEY & SON, Makers, 91 Liberty St., N. Y.

Second-hand Engines, Boilers, etc.

1 20x48 Allis Corliss Engine, right hand, Girder frame type.
1 18x42 Allis Corliss Engine, left hand, Girder frame type.
3 66"x16' Standard Tubular Boilers.
6 60"x16' Standard Tubular Boilers.
1 12 and 18¾x10½x12 Buffalo Steam Pump Co.'s compound duplex pump.
Root Blowers, Nos. 2, 3 and 5.
Large assortment of iron and wood working tools.

WISCONSIN MACHINERY & MFG. CO.
125-127 W. Water Street, Milwaukee, Wis.

For Sale—Dynamos, Engines, Boilers, &c.

DYNAMOS—Brand new, modern, best make, fully guaranteed for one year, 110 volt, compound wound.

27-light	Dynamos,	all complete,	$ 67.50.
53-light	"	"	112.50.
93-light	"	"	146.25.
130-light	"	"	183.75.
200-light	"	"	206.25.
270 light	"	"	228.75.

MOTORS—Brand new, best make, 110 volts, ¼ horse, $28.50; ½ horse, $36; 1 horse, $56.25; 2 horse, $67.50; 3 horse, $90; 5 horse, $135; 7 horse, $146.25; 10 horse, $183.75; 20 horse, $228.75 Have also 220 and 500 volt motors.

We have also some first-class second-hand Machinery, as follows: Alternating Current Dynamos—2 1300-light Westinghouse at $385 each, also others.

ENGINES.
100 H. P. Westinghouse Compound, $475.
50 H. P. Dick & Church Automatic, 300.
125 H. P. Westinghouse Compound, 600.
Also some 150, 250 and 350 H. P. Engines.
BOILERS—2 60"x16' Hor. Tubular, at $260 each.
Also larger and some smaller Boilers.
Berryman Heaters—1 700 H. P. $195; also smaller ones. Electric Power Generators—100 H. P., 500 volts, $675; also others. Pulleys, Shafting, Belting, &c. Write us.

American Electric Supply & Mfg. Co.
27 Thames Street, NEW YORK CITY.

BARGAINS IN

Second-hand Machinery

Steel Pressure Blowers Vertical Boilers, 6 to 60 H. P. Hor. Tub. Boilers, 27 to 100 H. P. 3 Hor. Tub. Boilers, 125 H. P., fine condition. 15, 25, 75 H. P. Hor. Slide Valve Engines. 3½ and 10 H. P. Vertical Engines. 2 and 7 H. P. Gas Engines. 3 H. P. Shipman Coal Oil Engine. Conant Corn Cooker. Corn Silker. Corn Cutter. One Fisher Kettle. Open Kettles. Lot Trucks. 6 Hughes Steam Pumps, 4½"x6"x6", 4" suction, 3" dis. One each Worthington and Dean Duplex Pumps and Receivers. S. A. Woods A Flooring Machine. Gray & Woods Planer, 24"x16"x18". Tenon Machine. Mortising Machines. Self feed Rip Saws. Sliding Carriage Cut-off Saw. Swing Saw. Variety Moulders. 18" and 20" Pony Planers. Huntingdon Hor. Boring Machine.
Machinery, Engines and Boilers Bought, Sold and Exchanged.

J. D. MALLORY,
22 Light Street, Baltimore, Md.

FOR SALE.

1 Blake Crusher, 20x10 with 35 h. p. Engine and Boiler, in first class order.
2 Lidgerwood Hoisting Engines, double 7x10, single drum, without boiler.
1 Phoenix Engine, 100 h. p.
Floating Pile Drivers, Deck and Derrick Scows,
2 Ozgood Dredges. 300 ft. 24" 5-ply Conveyor Belting, as good as new.

J. C. SAXTON, 18 Broadway, New York, N. Y.

FOR SALE.

11"x24" Slide Valve Engine, 8"x9" Vertical. Engine Lathe 17"x6'. Vertical Drill. Double Engine and Boiler Hoister. 15 horse portable. 6 horse Vertical Boiler. 50 horse Berryman Heater.

J. F. DENIHAN,
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Testing Machine FOR SALE.

200,000 pounds Second-Hand Riehle Testing Machine, in first-class condition. Address

E. B. BOGGS,
P. O. Box 688, NEW YORK CITY.

Tanks, Steam Pumps, Boilers, Engines and Frictionless Babbitt Metal, for sale. Machinery of all Kinds manufactured.

ESTIMATES FURNISHED.

E. J. CODD CO. Baltimore, Md.

FOR SALE.

Five hundred pieces of Second-hand Iron and Woodworking Machinery, Engines, Boilers, etc. Send for list.

L. F. SEYFERT'S SONS,
439, 439, 441 N. Third St. PHILADELPHIA PA.

FOR SALE.

No.	
	ENGINES.
375.	13x12 Ball automatic.
163.	Armington & Simms cross compound, 13¾x20¾x15.
192.	11x12 New York Safety.
217.	15x16 Ball automatic.
219.	11x20x14 McEwen tandem compound.
210.	11x10 Westinghouse.
148.	12x20x12 Westinghouse.
220.	11x19x11 Westinghouse.
222.	14x24x14 Westinghouse.
0x9.	18x30x16 Westinghouse.
297.	8½x10 Taylor-Beck automatic.
047.	22x60 Harris Corliss.
0x10.	16x36 Hoffman & Billings Corliss.
60.	13x34 Putnam Corliss.
75.	20x30 slide valve.
76	18x28 Nicol-Burr slide valve.
1044	16x28 slide valve.
235.	20x40 Nordburg slide valve.
213.	12x24 slide valve.
173.	13x34 Fitchburg Corliss.
132.	16x24 slide valve.
206.	14x24 box bed slide valve.
223.	23x36 Wright Corliss.
	GASOLINE ENGINES.
154.	Two 50 H.P. Otto gas and gasoline engines.
	HOISTING ENGINES.
810.	10x16 double drum, double cylinder Mundy hoisting engine.
755.	11x18 double drum, double cylinder Mundy hoisting engine.
753.	8¼x12 double, single drum.
377.	Locomotive boiler with hoisting rig attached.
108.	8x12 Webster, Camp & Lane double cylinder, single drum.
55.	8x12 single cylinder hoisting engine and boiler.
	BOILERS.
469	469 4-54x15, no dome.
004.	175 H. P. Heine water tube.
005.	120 H. P. Sterling water tube.
676.	60x12 Vertical fire box.
686.	66x16 tubular.
688.	66x18 tubular.
708.	66x14 tubular.
716.	4-72x20 tubular, no dome.
007.	80 H P locomotive fire box boiler.
008.	100 H P. locomotive fire box boiler.
009	50 vertical, from 2 to 20 H. P.
010.	20 locomotive fire box boilers, from 10 to 40 H. P.
0x2.	125 H. P. locomotive fire box boiler.
	AIR COMPRESSORS.
337.	1 straight line steam driven air compressor, made by National Drill & Compressor Co., 20x22x24.
890.	5¼x7x10 Norwalk air compressor.
896.	Hall duplex air compressors, steam driven 10x12x12, 6x8x8 and 8x.0x10. 1 Hall duplex belt drive 1 air compressor, 6x6.
902.	1 Hall duplex air compressor, 7x8x9.

WRITE FOR OUR CATALOGUE NO. 239.

CHICAGO HOUSE WRECKING CO.,
W. 35th and Iron Sts., CHICAGO.

FOR SALE.

One pair 20"x60" Harris-Corliss Engines, $2500.
One 26x60 Harris-Corliss Engine, $1200.
One practically new Harris-Corliss, 10x24, $550.
One 12x36 Swampscott-Corliss, $650.
One 18x48 Automatic Engine, $500.
One 26x60 Corliss Cylinder.
One 18x48 Corliss Engine.
One No. 8 Cyclone Dust Collector, 12" inlet.
One new 20"x42" Cylinder for Corliss Engine.
One 700 H. P. Heater, $125.
One 500 H. P. Heater.
One 700 H. P. Blake Condenser, $300.
20-36" Whitin Cotton Cards, new clothing, with carrier, railway heads, $35 each.
102-40" Whitin Looms, $25 each.
127-42" Iron Stack ¼", $150.
Large lot of leather and rubber belting.

F. H. DAVIS & CO.
53 State Street. BOSTON, MASS.

Corliss Engines.
28x60. 26x48. 26x60. 20x48.
Automatic Engines.
12 and 21x24 Porter-Allen Cross Compound.
16x16 Ball. 15x14 Ball.
12x12 A. & S. 8x10 Russell. 10x12 Ball.
Slide Valve Engines.
24x48, 16x24, 12x24, 10x16, 8x10.
Tubular Boilers.
72x18, 66x16, 60x18, 60x16 and smaller sizes.
Portable and Vertical Boilers, all sizes
Single & Duplex Pumps, all Sizes.
Saunder's Pipe Machine. Foundry Equipm't.
64 in. Bending Rolls. Pipe and Fittings.

Atwell Machinery Co.
Office, 507-508 Hamilton Bldg., Pittsburg, Pa.
L. D. 'PHONE 1893 GRANT.

FOR SALE.

Second-hand Corliss Engines,

100, 150, 200, 350, 500 and 800 H. P. Boilers, all sizes. Steam Pumps in great variety. Send for bargain list of second-hand machinery.

S. L. HOLT & CO.
67 Sudbury Street, BOSTON, MASS.

FOR SALE.

2 120 H. P. 66"x18' Tubular Boilers.
1 80 H. P. 60"x.6' Tubular Boiler.
1 60 H. P. 54"x18' Tubular Boiler.
1 100 H. P. 14¾x16 Buckeye Auto. Engine.
2 16x12x10 Worthington Duplex Pumps.
2 31 Exhaust Fans.
1 60 H. P. 10x12 N. Y. Safety Auto. Engine.
1 80 H. P. 12x20 Atlas Left Hand Automatic Engine.
18 ½x10¾x10 Worthington Duplex Pumps.
9x12 Ide Automatic Engine.
Also a large number of smaller Engines, Boilers, Pumps, Heaters, etc.

E. O. WILLIAMS,
Successor to RAINIER & WILLIAMS,
63 S. Canal St., CHICAGO, ILL.

XUM

FOR SALE—New or Second-Hand
STEEL T
RAILS
Light or heavy section.
WE BUY OLD RAILS if fit to relay.
Robinson & Orr, 419 Wood St., Pittsburg, Pa.

ENGINES.

22"x42" Wright Corliss.
14"x30" Horizontal Slide Valve.
10"x20" Supplee Horizontal.
8"x 7" Upright Yoke Engine.
4½"x7" Upright Oscillating.
For sale cheap. For further particulars and prices apply to
POULTERER & CO.
410 Bullitt Building, PHILADELPHIA, PA.

FOR SALE!
1 25-h. p. locomotive boiler, 1 15-h. p. return tubular boiler and ten radiators, also 6 miles 40-lb. steel relaying rails. Southern delivery, first of January, and 40 40,000 capacity flat cars.
LOCOMOTIVES, standard and narrow gauge.
1 75-h. p. ret. tub. boiler; 70 ton 40 lb. steel T rail, immediate delivery. Also a Forney type saddle tank standard gauge Porter locomotive, cylinder 12x18, diameter of driving 42", thickness 2"; also an 8-wheel American type, Rodgers make, 14x22" cylinder. 1- Saw Mill, capacity about 15 or 20,000 ft. a day; also 3000 Standard M. C. B. good second hand couplers, one 42" gauge passenger coach and two 75-H. P. return tubular boilers. These goods are all right. Write
JOS. E. BOWEN, Citizens Bank Bldg., Norfolk, Va.

FOR SALE.—CHEAP.
2 first-class 66"x18' Tubular Boilers with 54 4" Tubes; boilers connected by both mud and steam drums; full flush front fixtures; built in 1897; subject to inspection; Tupper grate bars, very fine. Can deliver about January 15th.
WALTER A. ZELNICKER, in St. Louis.
Branch Offices: The Rookery, Chicago; Townsend Bldg., N. Y.; Godchaux Bldg., New Orleans; Pioneer Press Bldg., St. Paul.

FOR SALE.—Engine 12½x24, $200; 12x16, $200. Traction Engines, 10 and 12 horse, $300; 10 and 12 horse portables on wheels, $175 each. One Fire Engine, made by Cole Bros., Pawtucket, R. I., all complete. Pratt & Whitney Drill Presses, 12" swing, $15. Five Boilers, 56x18, twenty flues 6" diam., $300 each. 16-horse Portable Engine and Boiler on wheels, with Pony Saw Mill, $300. 10-horse Hoisting Engine, Portable Boilers, 20, 30, 35-horse, with engines to match, at one-third their actual value. Machinery of every description at buyers' prices. D. L. CASEY MCH. CO., Springfield, O.

HIGH SPEED ENGINE BARGAINS.

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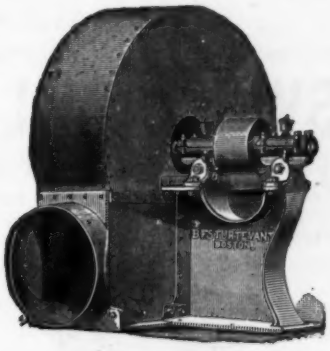

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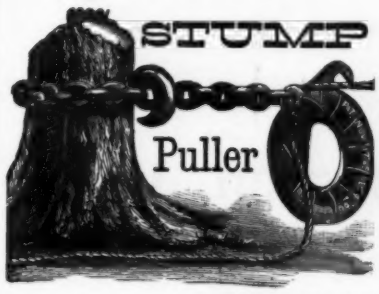

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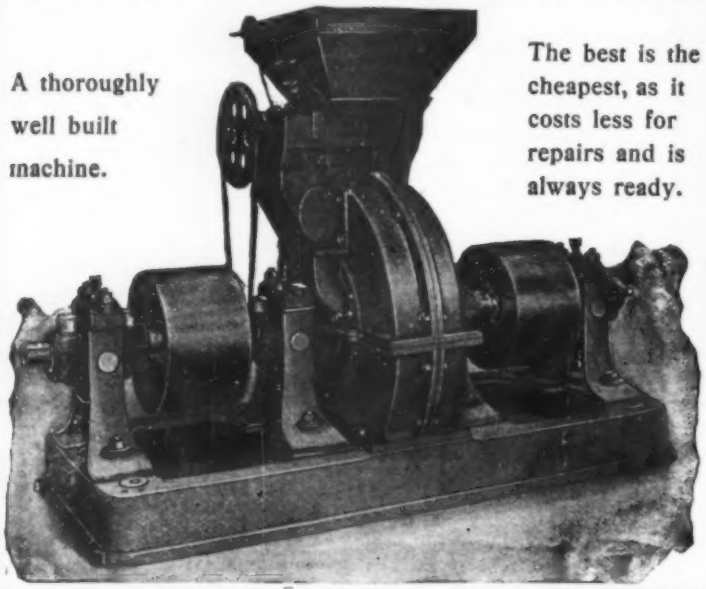

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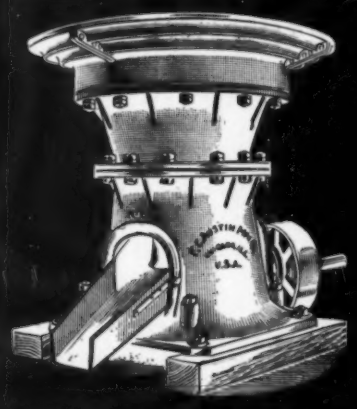

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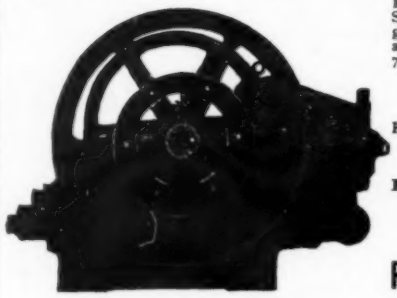

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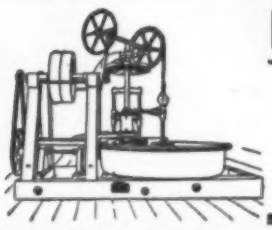

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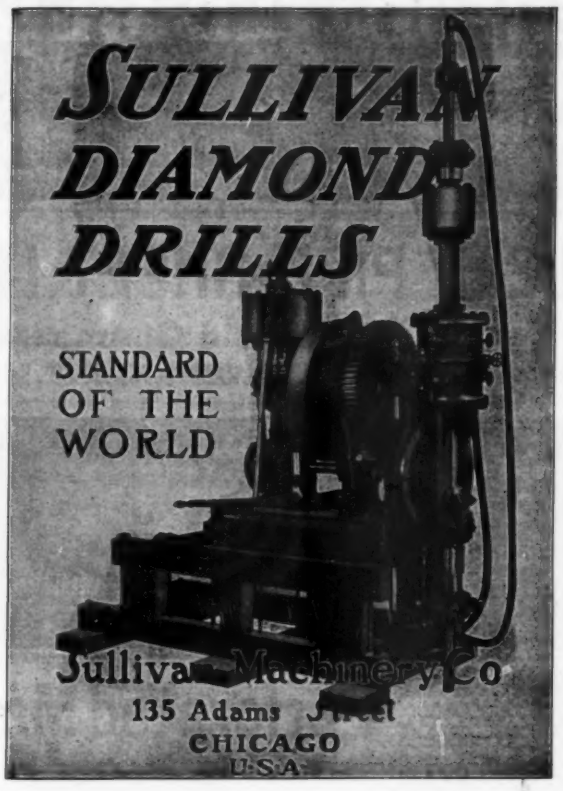

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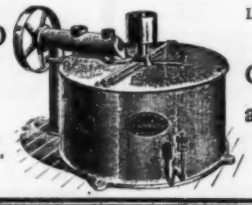

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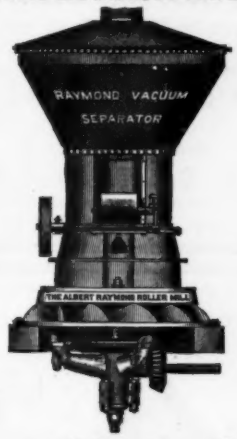

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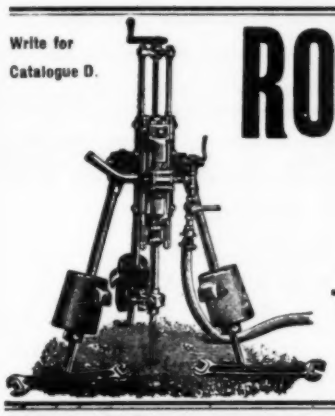

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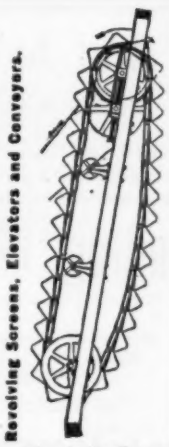

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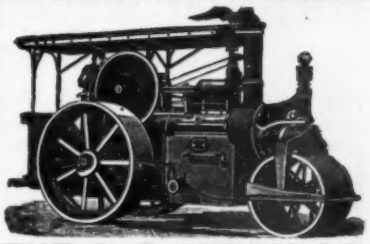

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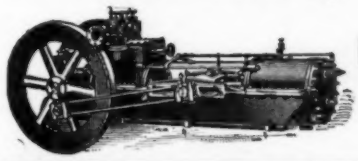

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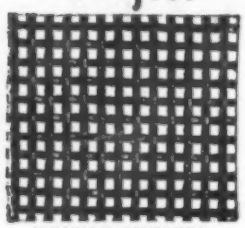

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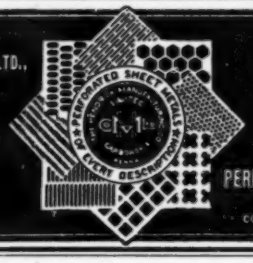

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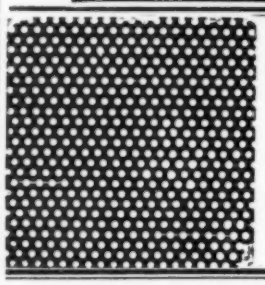

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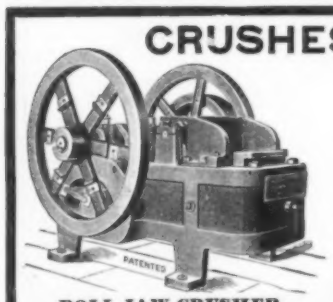

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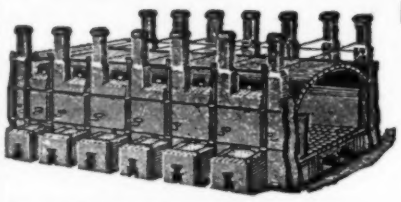

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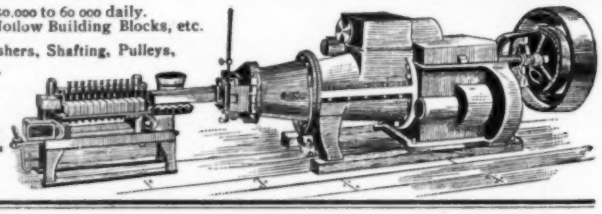

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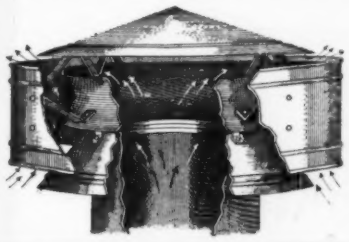

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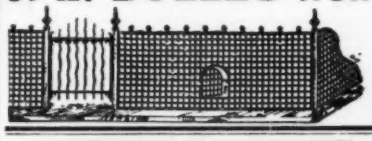

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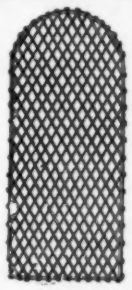

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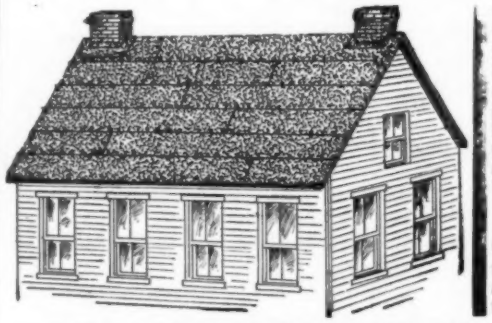

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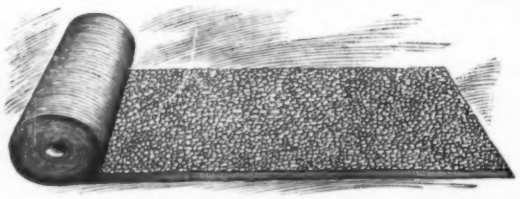

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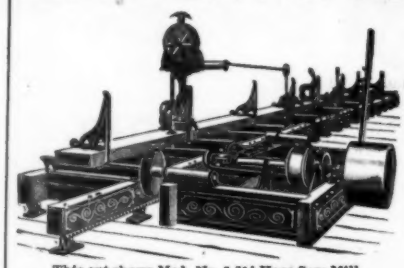

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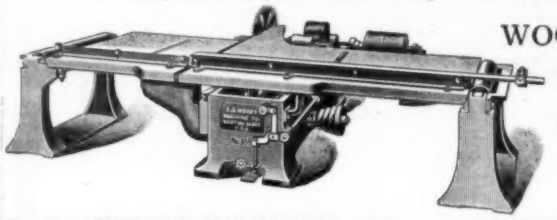

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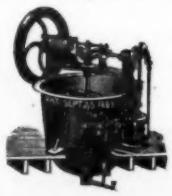

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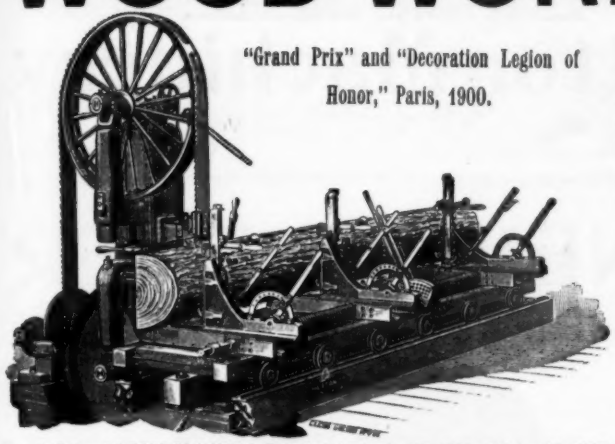

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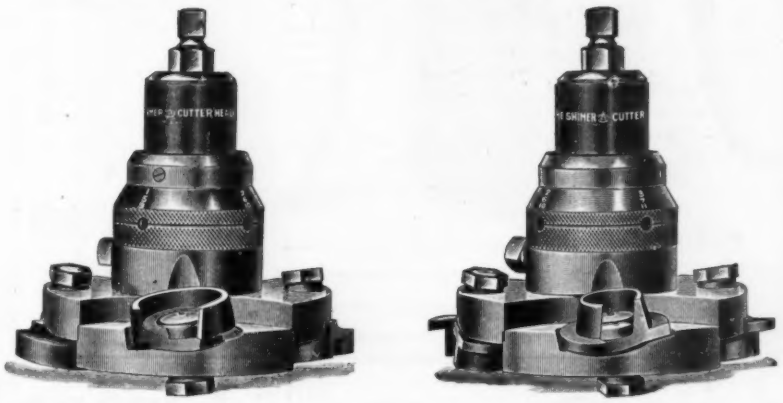

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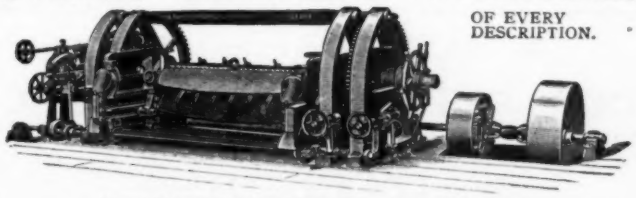

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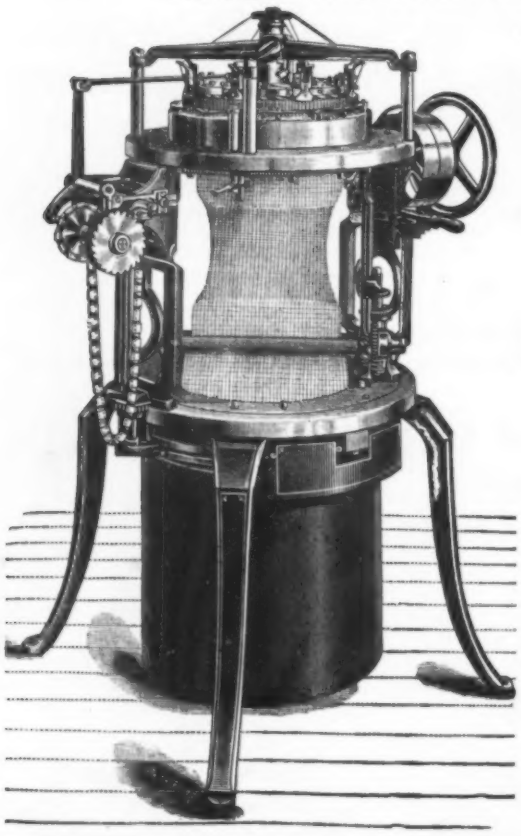

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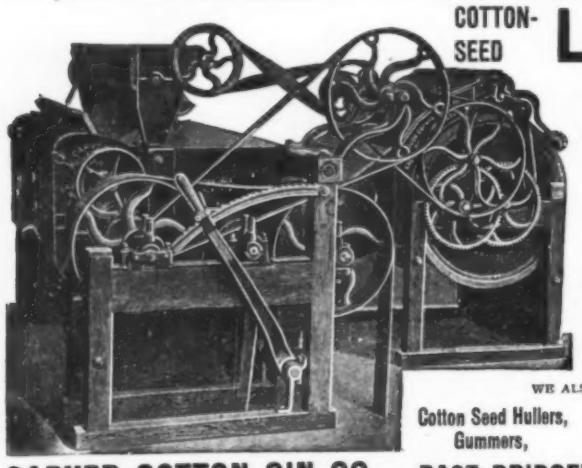

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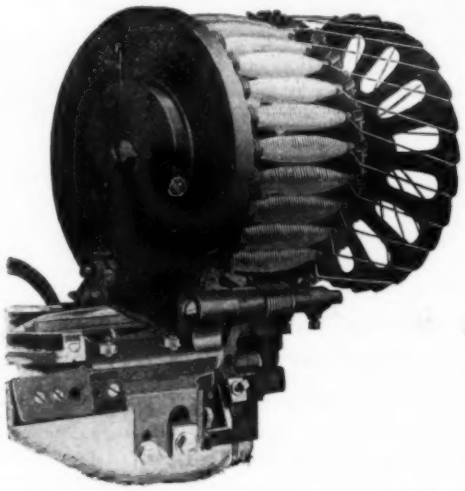

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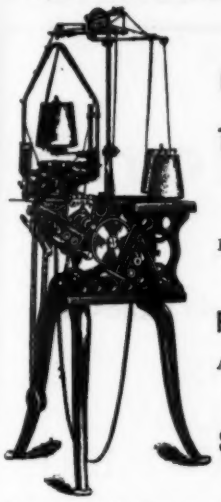

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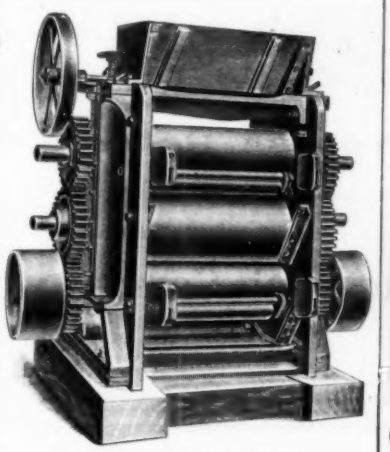

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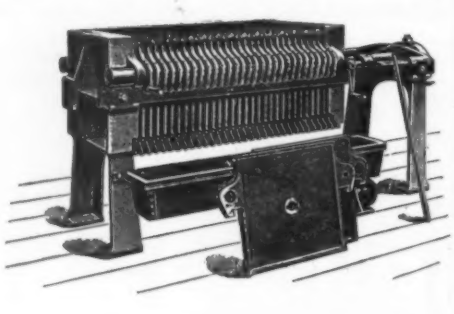

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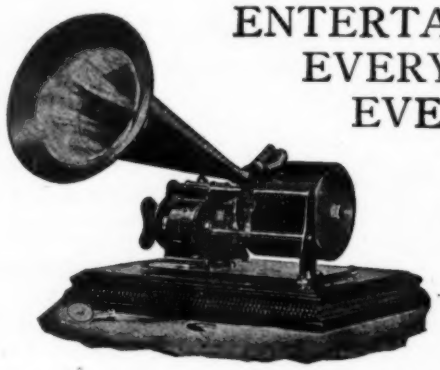

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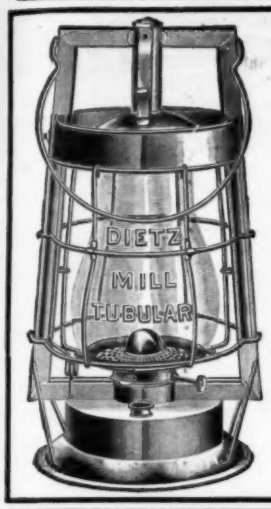

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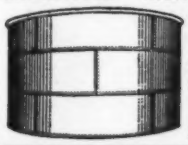

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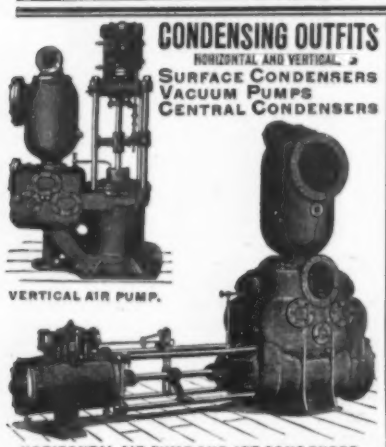

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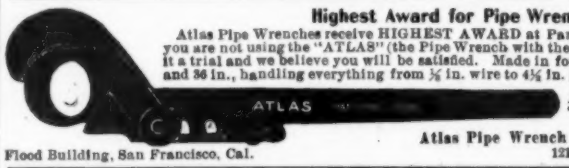

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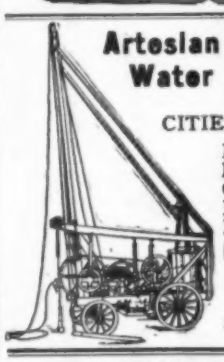

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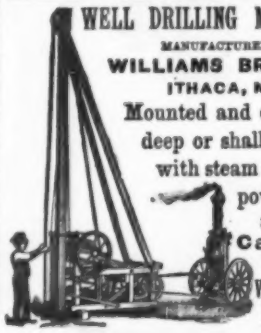

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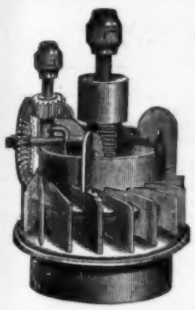

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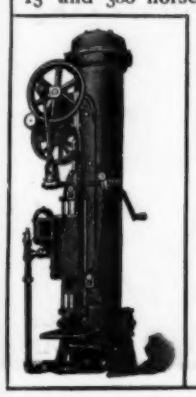

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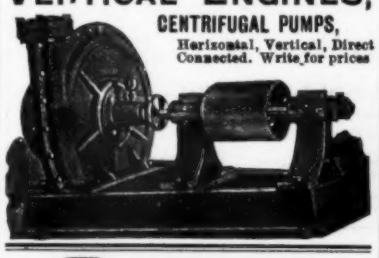

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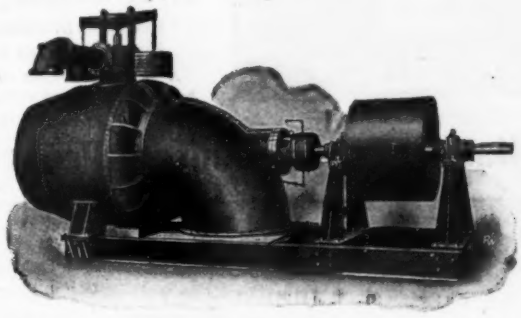

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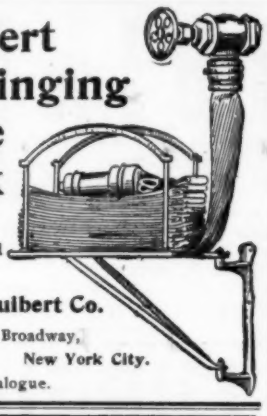

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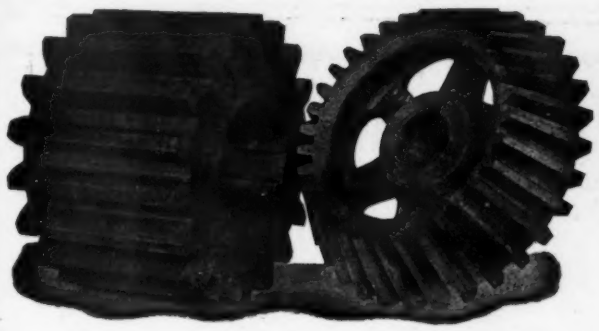

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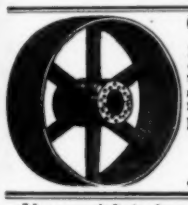

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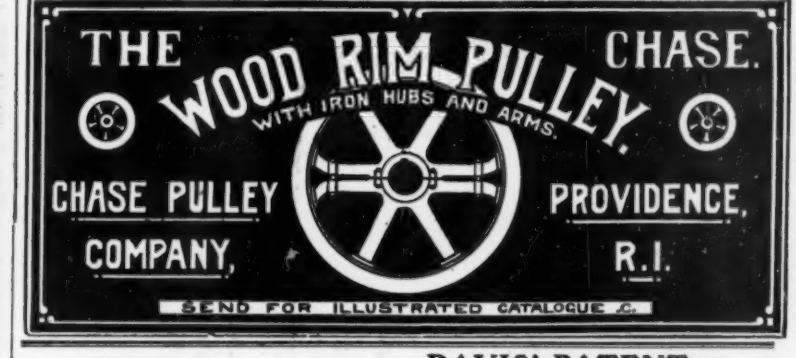

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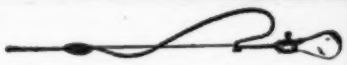

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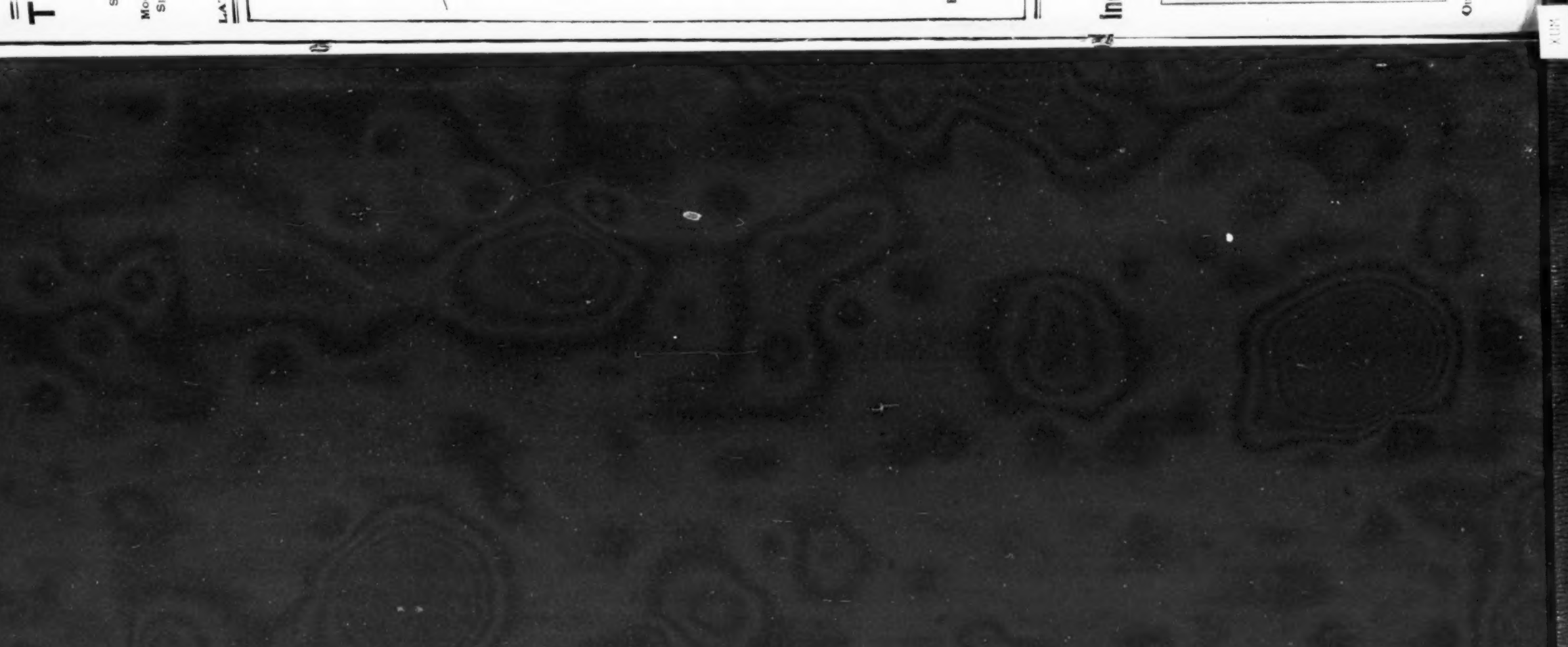

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	Gas.	Electric.
2 light	$2.44	$2.44
3 "	3.00	3.00
4 "	3.56	3.56

COMBINATION.

2 gas, 2 electric	$3.64
3 " 3 "	4.69
4 " 4 "	5.74

Spread 20 inches.

No. 0973.

GAS OR ELECTRIC.

	Gas.	Electric.
2 light	$2.81	$2.81
3 "	3.75	3.75
4 "	4.69	4.69

COMBINATION.

2 gas, 2 electric	$4.13
3 " 3 "	5.63
4 " 4 "	7.13

Spread 20 inches.

No. 0973.

No. 0975.

No. 0975.

GAS OR ELECTRIC.

	Gas.	Electric.
2 light	$2.63	$2.63
3 "	3.38	3.38
4 "	4.13	4.13

COMBINATION.

2 gas, 2 electric	$3.94
3 " 3 "	5.44
4 " 4 "	6.94

Spread 20 inches.

Globes, Shades, Holders, Wiring and Sockets are not included in the price of fixtures.

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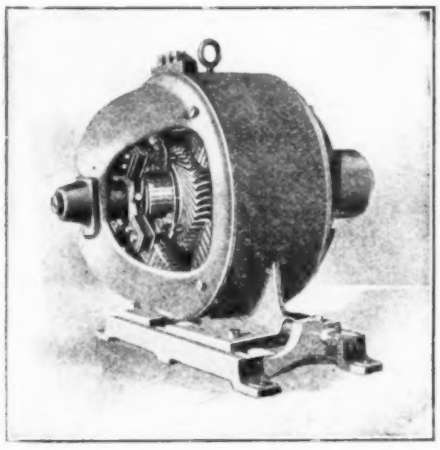

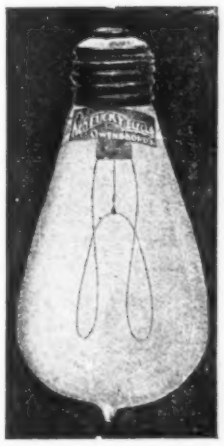

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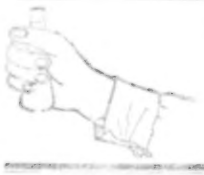

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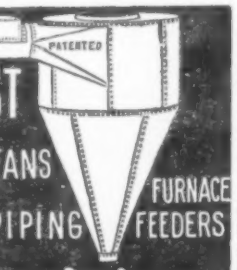

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